C677
T35b

85 NO. 9

textile bulletin

SEPTEMBER • 1959

How Good Are Your Slashers?
(Page 69)

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N. C., under Act
March 2, 1897.

TOPS IN QUALITY

West Point's PACESETTER Slasher

This **LATEST MODEL** of West Point Foundry's high capacity multi-cylinder slasher has the largest journals and bearings, the largest sprockets, the heaviest frame.

The **PACESETTER CYLINDER SECTION** features side panels that simply lift out to give easy access to cylinders and sprockets. No bolts, screws or nuts to remove, to tighten or to lose. *Covered steam and condensate manifolds.*

The **PROVED AND RUGGED HEAD END** with traversing headstock is already in operation in a dozen mills on the widest sheeting and the lightest leno.

- Can accommodate beams varying *over 100 inches* in width without projecting arbors . . . NOT LIMITED TO 50 INCHES.
- No gear reducer, no gear motor, no torque tube, no universal joints! What could be simpler and less troublesome than chain and V-belt drive with replacement parts available from any supply house?

LEADERSHIP PROVED BY SALES: In the last three years alone, over 50 textile mills have installed more than 130 West Point Foundry Multi-Cylinder Slashers.

WEST POINT
Foundry & Machine
Company
WEST POINT, GEORGIA

Representatives:
West Point, Ga.—Tel. 3-3411
Greenville, S. C.—CEdar 5-0120

next time...

WHYDONTCHACALL

Louis P. Batson

THE 'P' IS FOR PRONTO!
ORDER
Rush

When time is important . . . when you need supplies "yesterday," when you must meet that impossible schedule . . . call us. We'd like an opportunity to show you what we can do . . . the kind of service you can expect from Louis P. Batson Company. CALL US COLLECT the number is Greenville CE 2-7691.

You'll get fast service!

LOUIS P. BATSON Company

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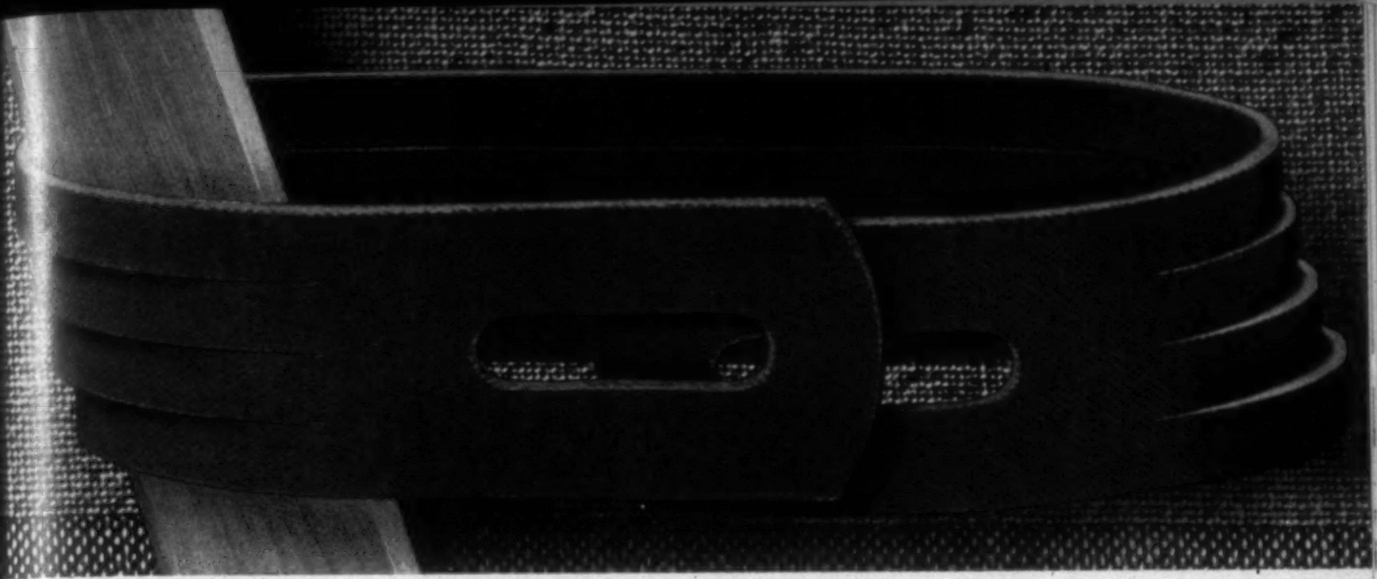
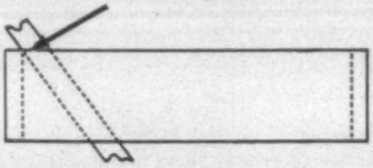
GREENVILLE, S. C.

THESE ARE ALWAYS "ON THE SHELF" READY FOR IMMEDIATE DELIVERY: • ShuR-CusH vibration pads • ShuR-TufF harness strapping • woven felts • felt cut parts • ShuR-TufF wirecenter harness cords • hookless harness adjustors • dobby and gem head stirrups, loops, jackeyes • positive adjustment jack sticks and parts • neva wear case hardened jack hooks • turnbuckle harness adjustors and regulators • adhesives and cements • sheaves • static eliminators • hand dryers • laminated picker sticks, sweep sticks, power adjustors • pickers, check straps, belting • temple rolls, shell rolls, beam barrels • shuttle fur • clear plastic for loom aprons, covers, dividers • leece rods, warp clamps, loom flags • castings • aluminum, brass • mats and matting • fancies or fancy rolls for cards • jacquard twine and neck cord • set mark preventors for looms • harness connectors • fibre, fabric, leather • bumpers • yarn tinting devices for looms and quillers • ShuR-TufF lug straps • shuttle and bobbin protectors • time clocks, watchmen clocks • shuttle pegs and bristles • oilless bushings • lug hold ups • take up roll covering • harness and leader wires • "C" hooks and "S" hooks

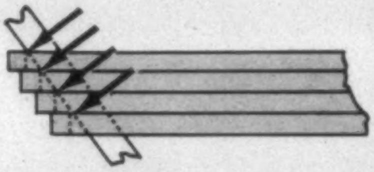


Gates 4-in-One Check Strap LASTS up to 3 TIMES LONGER

New Checking Principle is Secret of Longer Wear—



With the ordinary one-piece check strap, all shock and wear from the picker stick are concentrated at one point.



Gates 4-in-1 Check Strap is built with four separate bands. As the checking action begins, a portion of the picker stick force is absorbed by the top band—then in turn, the second, third and fourth bands each absorb a portion of the shock, providing a checking action that is smooth and even. Wear is distributed evenly over the entire width of the strap, increasing service life up to 3 times.

You Get These Important Benefits:

Unaffected by Changes in Humidity—no stretch or contraction—ready to go Monday mornings without time-consuming adjustments.

Stronger and Tougher than Leather—yet flexible and light in weight.

Absorbs Shock of Picker Stick—resilient and flexible—conforms to any action of the picker stick, absorbing blows and shocks.

Saves Installation Time—quickly installed and adjusted without removing picker sticks. No new brackets needed.

Competitive Price—even though Gates 4-in-1 Check Strap has many important advantages over ordinary straps, it is competitively priced. For faster, more economical production, equip your looms with *all* Gates *specially engineered* accessories . . . available from Gates Textile Distributors.

Gates Distributors
are in the
Yellow Pages

Gates

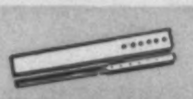
The Gates Rubber Company, Denver, Colorado

The Mark of *Specialized* Research

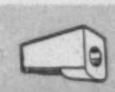
TPA-900

Take-up Roll Coverings
Card Bands
Cone and Evener Belts
Spinning Frame Drives

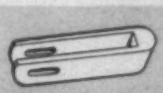
Reversible Pickers



Tex-Hide Harness Straps

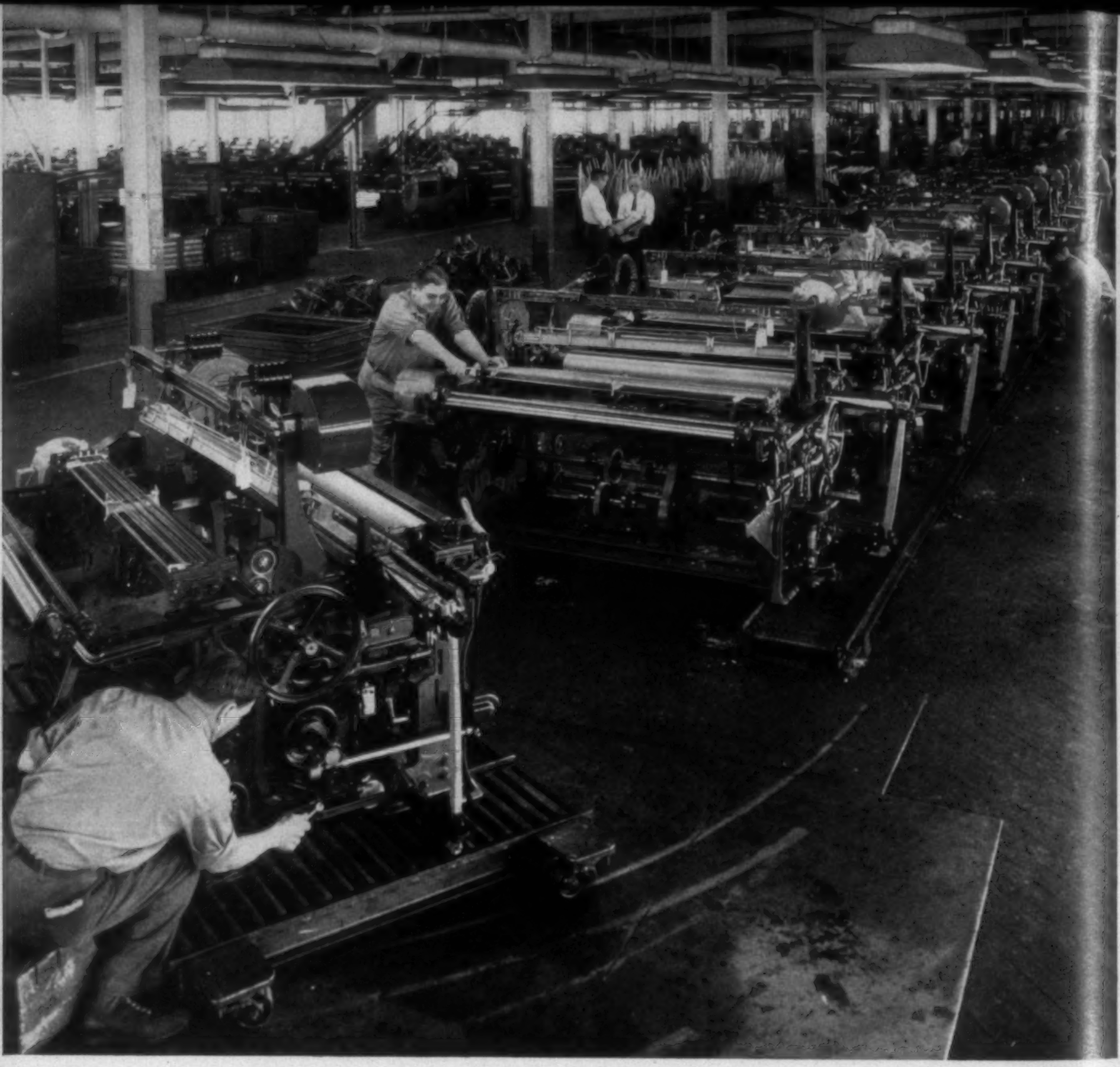


Tex-Hide and Vulco Loop Pickers

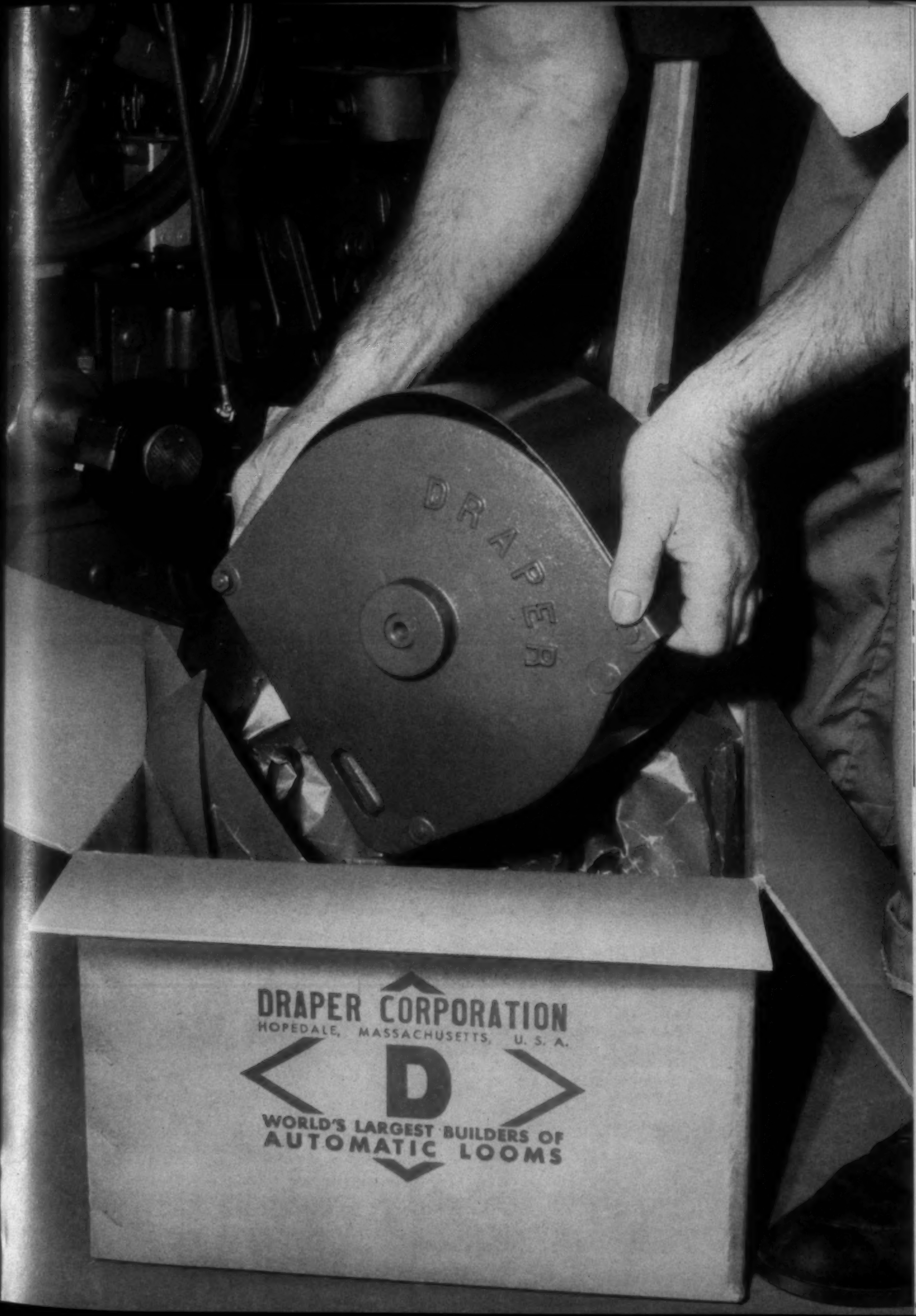


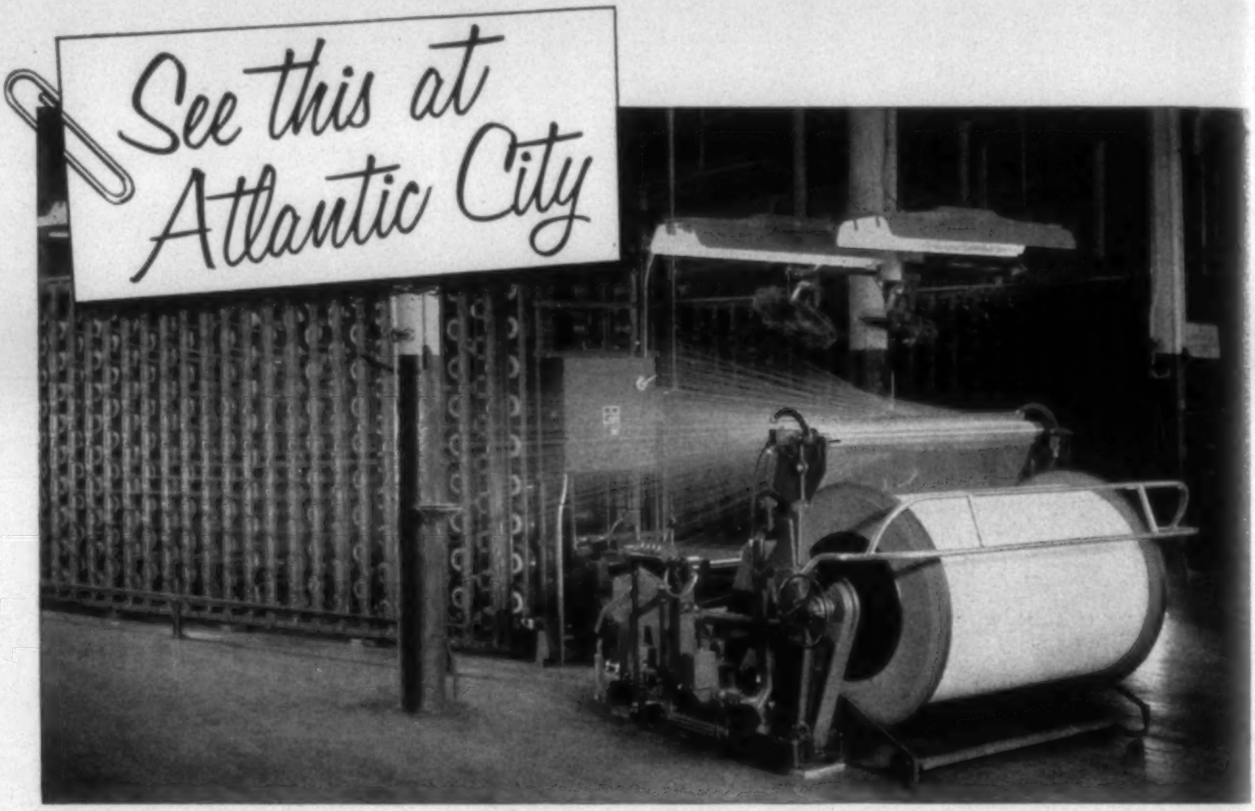
Thin Tex, Vulco, Tex-Hide & Super Tex-Hide Lug Straps

Gates Textile Accessories



QUALITY OF ENGINEERING AND MANUFACTURE ARE TWO BIG REASONS WHY MORE AND MORE MILLS ARE SPECIFYING DRAPER LOOM PAR S EXCLUSIVELY. THE CLOCK SPRING TOP IS ONLY ONE OF MANY DRAPER MECHANISMS THAT AID IN INCREASING LOOM EFFICIENCY AND REDUCING COSTS. FOR ADDITIONAL INFORMATION ON THE CLOCK SPRING TOP OR OTHER DRAPER COST SAVING PARTS OR MECHANISMS CONSULT YOUR DRAPER REPRESENTATIVE TODAY. • **DRAPER CORPORATION**


DRAPER
DRAPER CORPORATION
HOPEDALE, MASSACHUSETTS, U. S. A.
D
WORLD'S LARGEST BUILDERS OF
AUTOMATIC LOOMS



BARBER COLMAN

AMERICAN
TEXTILE MACHINERY
EXHIBITION
ATLANTIC CITY
ATLANTIC CITY, N.J.
MAY 23-27, 1960

BIG PACKAGES and BIG BEAMS

The development of process machinery to handle larger packages and wind larger beams has introduced important economies in mill operation. See these new ideas in action at Atlantic City. Learn how you can benefit by using these methods in *your* mill.

SUPER-SPEED WARPERS

Watch the new Barber-Colman Super-Speed Warper and Creel in operation on typical yarns. This great machine is redesigned throughout for better economy, easier operation, and improved performance. In addition, the Barber-Colman exhibit will present many other interesting and up-to-date ideas of substantial value. *Plan now to visit the big show at Atlantic City.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINE

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.

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Industria e Comercio de Maquinas S. A.
"COMASA"
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Sao Paulo, Brazil

JAPAN
Do-Yei Shoji Kabushiki Kaisha
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11, Bingo-Machi, 3-Chome,
Higashi-Ku
Osaka, Japan

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11 Piccadilly
Manchester 1, England

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Associated Agencies
(M'cr) Ltd.
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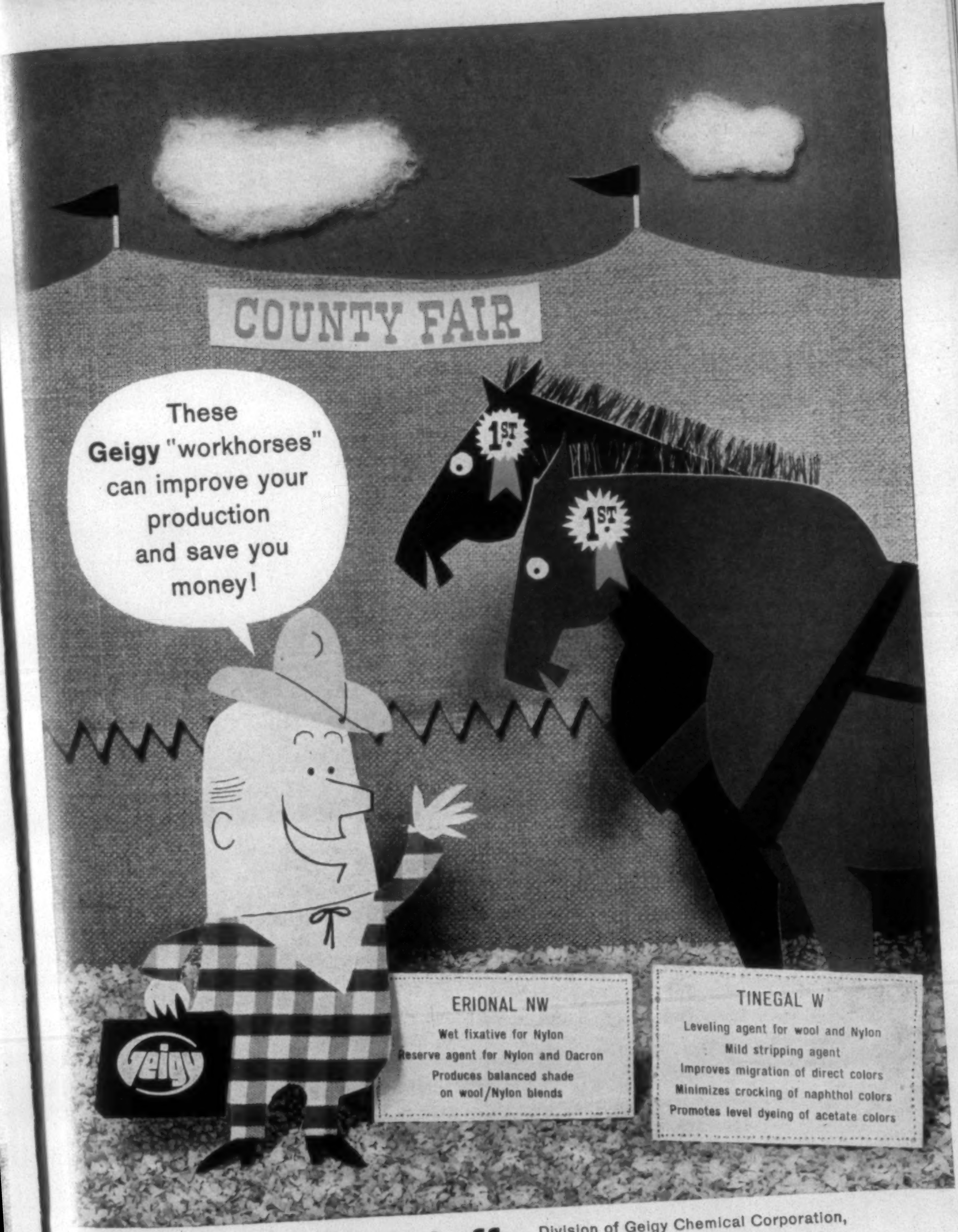

COUNTY FAIR
These Geigy "workhorses" can improve your production and save you money!
1ST
1ST
Geigy

ERIONAL NW

Wet fixative for Nylon
Reserve agent for Nylon and Dacron
Produces balanced shade on wool/Nylon blends

TINEGAL W

Leveling agent for wool and Nylon
Mild stripping agent
Improves migration of direct colors
Minimizes crocking of naphthol colors
Promotes level dyeing of acetate colors

Geigy Dyestuffs Division of Geigy Chemical Corporation,
Saw Mill River Road, Ardsley, New York

Branches: Charlotte, Chattanooga, Chicago, Los Angeles, Newton Upper Falls, Philadelphia, Portland

NEW...SUPERIOR...

MANHATTAN SLASHER ROLLS

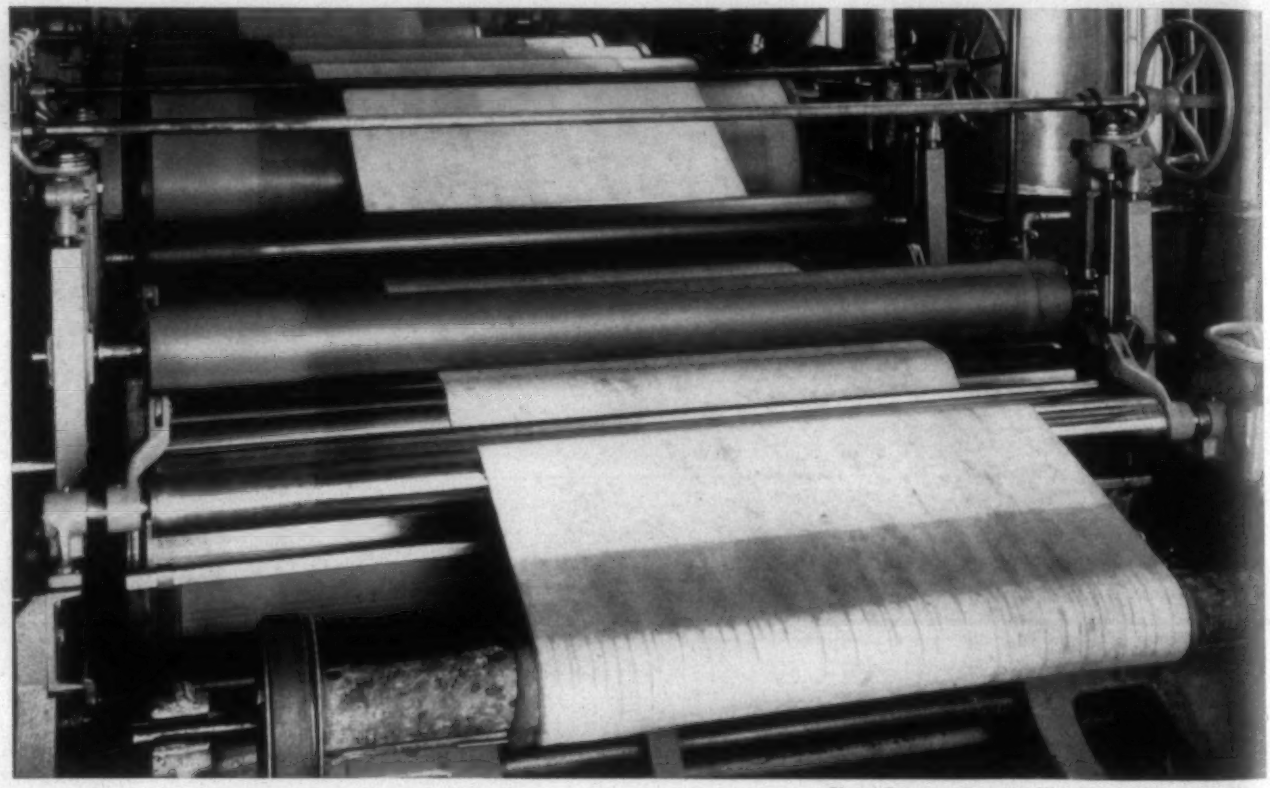


Photo Courtesy Prescott Warping & Warp Dye Corp.

FEATURE-FOR-FEATURE YOUR BEST BUY FOR IMPROVED SIZING AT LOWER SLASHING COSTS

- Special synthetic rubber compounds control size pick-up to your requirements
- Uniform, correct roll density assures *uniform,* even pick-up—the finish *you want*
- Accurate metering of size permits substantial savings in starch costs
- Distinctive red roll color permits faster, easier detection of yarn end breaks
- Keep perfect cushion *without* indentation—eliminate slasher downtime costs to maintain blanket
- Roll end-caps prevent metal corrosion betwee
cover and metal core
- Provide highest resistance to starches, gum
softeners, oils or chemicals. Can be regroun
for longer life

*NOW . . . GET FASTER, LOWER COST SLASHING . . .
MORE UNIFORM YARN SIZING—USE MANHATTA
SLASHER ROLLS AT BOTH SQUEEZE AND DRESSIN
ROLL POSITIONS*

RM-

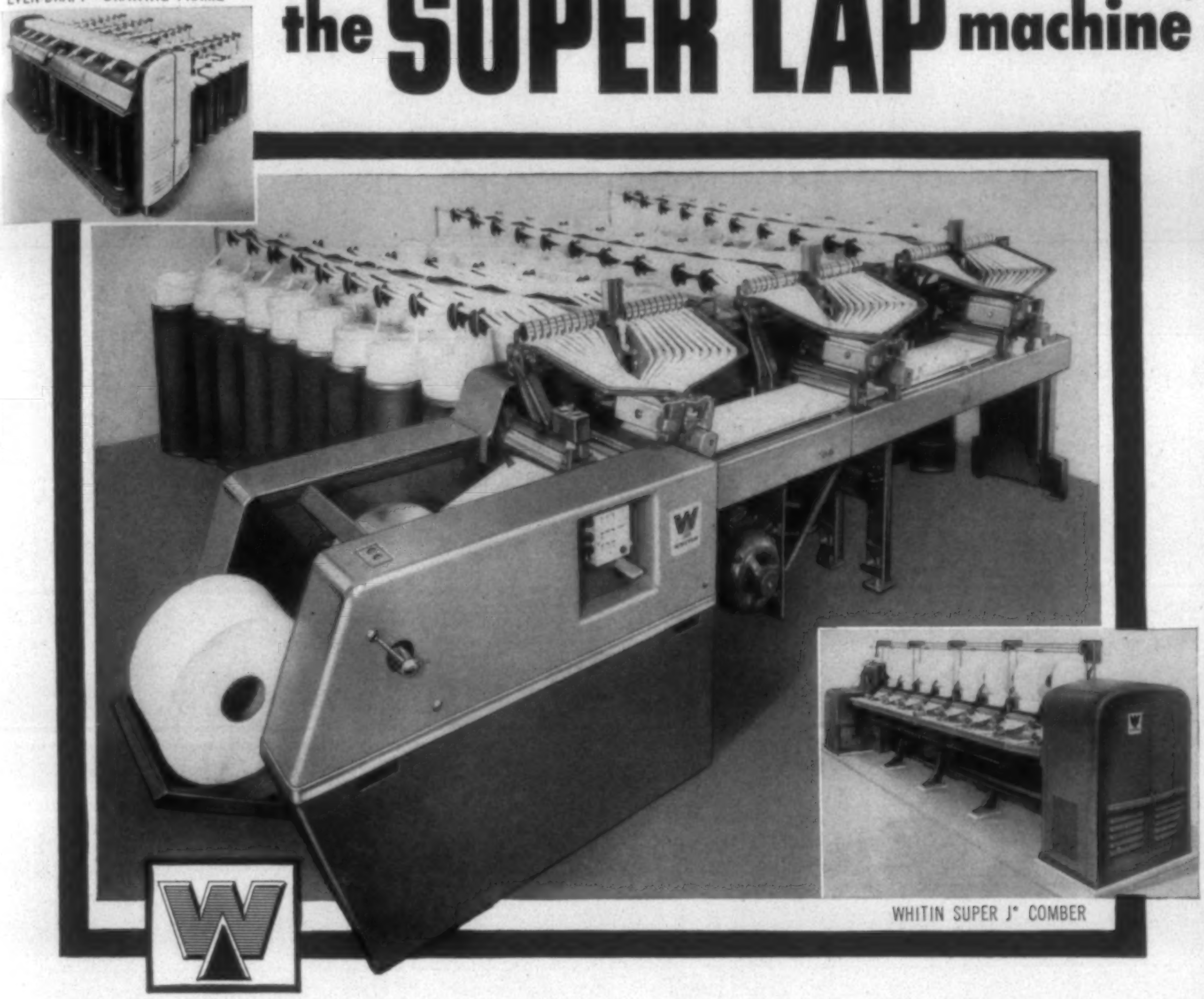
MANHATTAN RUBBER ROLL DIVISION—NORTH CHARLESTON, SOUTH CAROLINA

RAYBESTOS-MANHATTAN, INC.

Other R/M Products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

The WHITIN SUPER J's New Running Mate-

the SUPER LAP machine



WHITIN
EVEN-DRAFT* DRAWING FRAME

WHITIN SUPER J* COMBER

The new Whitin Super Lap machine heralds a major advance in cotton processing. Running-mate to the famous Super J Comber, the Super Lap and the new Whitin Super Lap Preparation Method* hold promise of material savings in the making of combed yarns thru improving yarn quality, increasing Comber production and reducing Comber waste.

The Super Lap was specifically designed by Whitin Research engineers to implement a new concept in preparing Comber laps — the Whitin Super Lap Preparation Method — in which card sliver is first processed on the Even-Draft Drawing and then formed into laps by the Super Lap. This sequence of operations results in the superior lap in which all hooked and bent fibers have been straightened and made parallel — then on to the Super J Comber.

Through this new method Whitin offers you these competitive advantages:

- **Lap production 500 lbs./hr. — 35 lb. laps from 60-end can feed.**
- **Up to 3% reduction in noils.**
- **Lap weights up to 1000 gr./yd. permit increased Comber production. (20-25%).**
- **Straightened and parallel fibers in lap afford easier combing.**
- **Recommended total draft 24-32.**
- **Improved yarn quality.**

*(Pat. applied for)

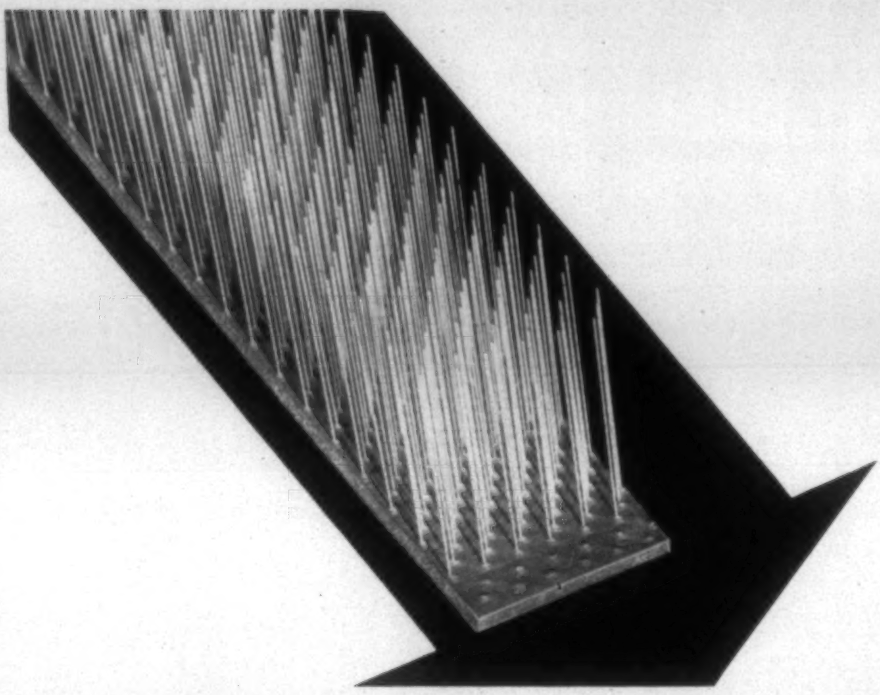
For complete information see Whitin representative or write us direct.

WHITIN MACHINE WORKS

TRADE MARK

WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.



Straight as a Ramrod Perfect in Alignment—

that's Tuffer

TRADE MARK

The carefully ground teeth of Tufferized Card Clothing are set with military precision in Tuffer foundation to suit the individual job.

These tough wires stand straight and firm as a ramrod, with just the proper flexibility, and with every point in exact position. And expert grinding keeps the points efficiently sharp for a long, long time.

Tuffer precision craftsmanship produces the consistently uniform Card Clothing you want for a smooth, even sliver with minimum variation.

You're sure of maximum production with Tuffer. For special problems, a Tuffer sales engineer with access to the accumulated manufacturing experience of more than 90 years, is always available.

TUFFER PRODUCTS

- Card Clothing for Woolen, Worsted, Cotton, Asbestos and Man-made Fibers
- Napper Clothing and Brushes
- Top Flats re-covered and extra sets loaned at all Plants
- Lickerins rewired at Southern Plants
- Hand Stripping Cards

HOWARD BROS.

WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., Gastonia, N. C., Greenville, S. C.
Direct Representation in Canada

Newest ideas in colorful treatments

A colorful conclusion for woolens . . . Amacid* and Chromaven* Dyes

Capture the spirit of the season with all your woolen goods . . . use AMACID and CHROMAVEN DYES. Available in a complete range of lively hues, Koppers select dyes are fast to sunlight, washing, perspiration and dry cleaning. You'll find, too, that these dyes are easily applied, and that they meet specific color demands for every type of wool dyeing—yarn or piece goods. So specify AMACID and CHROMAVEN DYES and get the color treatment you want . . . prize woolens dyed to stay vibrant.

For more information or technical assistance, get in touch with your nearest Koppers representative. Our laboratory facilities are always at your disposal.

*REG. U.S. PAT. OFF.

KOPPERS COMPANY, INC. *CHEMICALS AND DYESTUFFS DIVISION*

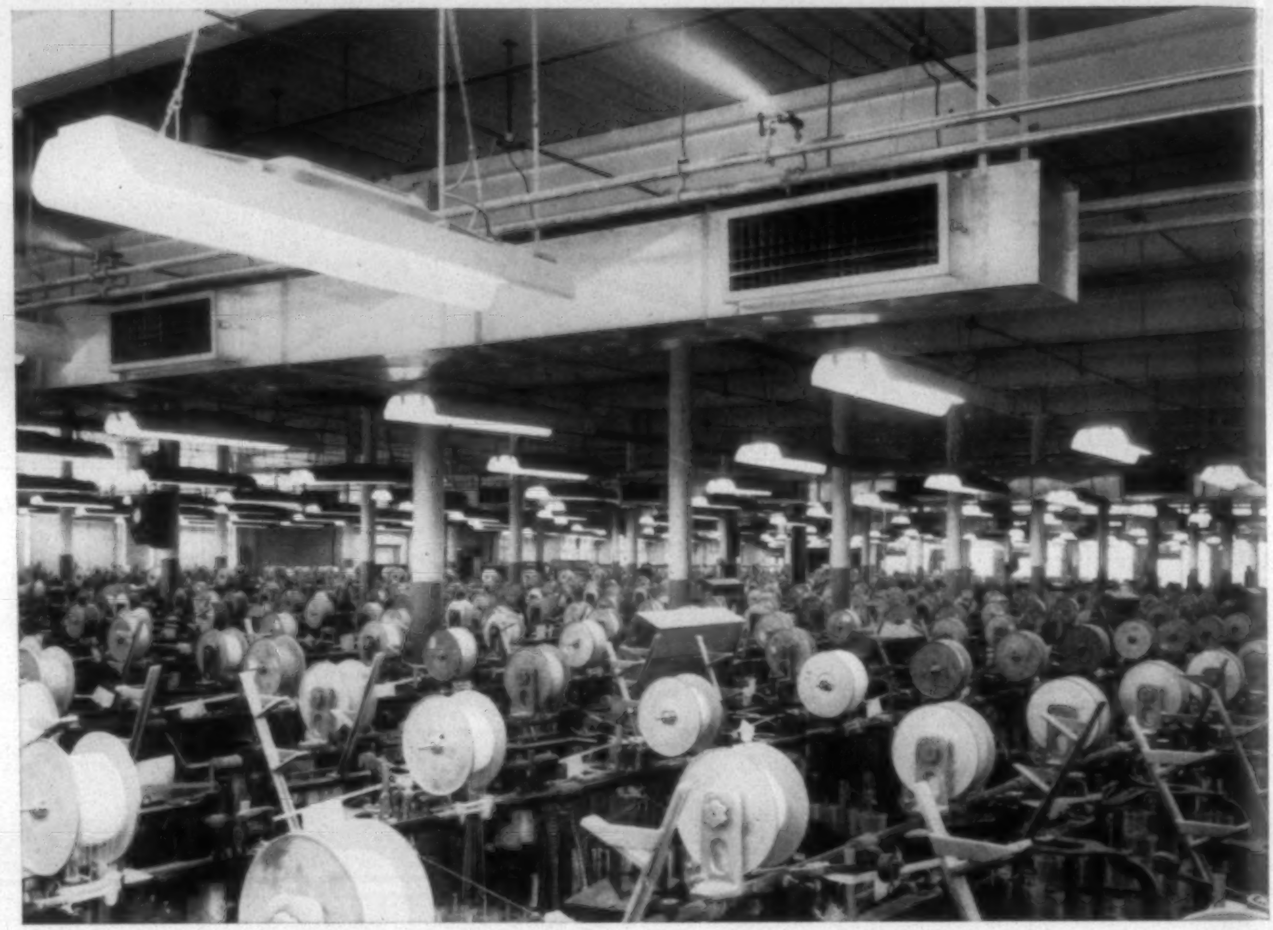
Pittsburgh 19, Pennsylvania

(FORMERLY AMERICAN ANILINE PRODUCTS) PLANT: Lock Haven, Pa.

BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. • Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. Columbus, Ga. • Los Angeles, Calif.

IN CANADA: Dominion Anilines & Chemicals, Ltd., Toronto, Canada • Montreal, Canada

VMA 66



Providence Braid Company, Providence, R. I. showing ductwork, air outlets and atomizers.

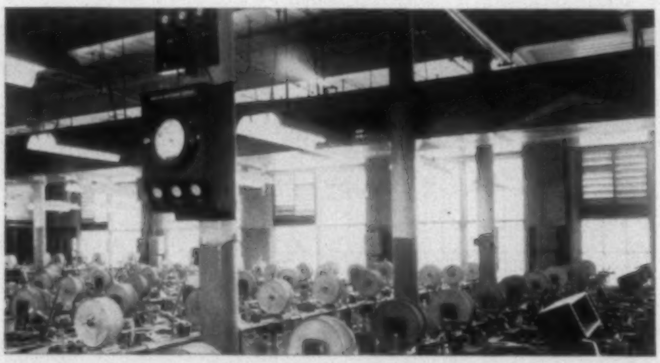
Is your humidifying system providing maximum cooling?

At Providence Braid Company an Amco Unit Dry-Duct system operates to control humidity precisely and, at the same time, to provide maximum cooling commensurate with the required evaporation.

As moisture from atomizers in a humidifying system evaporates, heat is absorbed and the air temperature is lowered. This cooling can be increased substantially by a positive ventilating system (such as an Amco Unit Dry-Duct system) which introduces fresh air uniformly throughout the mill room, thereby deliberately increasing the demand for evaporation in order to lower the temperature and maintain the selected humidity.

A unit dry-duct system consists of one or more air handling units, air ducts, room atomizers and pressure type window vents. When cooling is not required, recirculated air (instead of fresh air) is drawn into the unit, filtered and heated when necessary, then distributed through the ducts back into the room.

Amco's Unit Dry-Duct system is only one of several types of textile mill air conditioning systems which Amco engineers, manufactures and installs. For expert help, based on more than 70 years' experience, next time call on Amco.



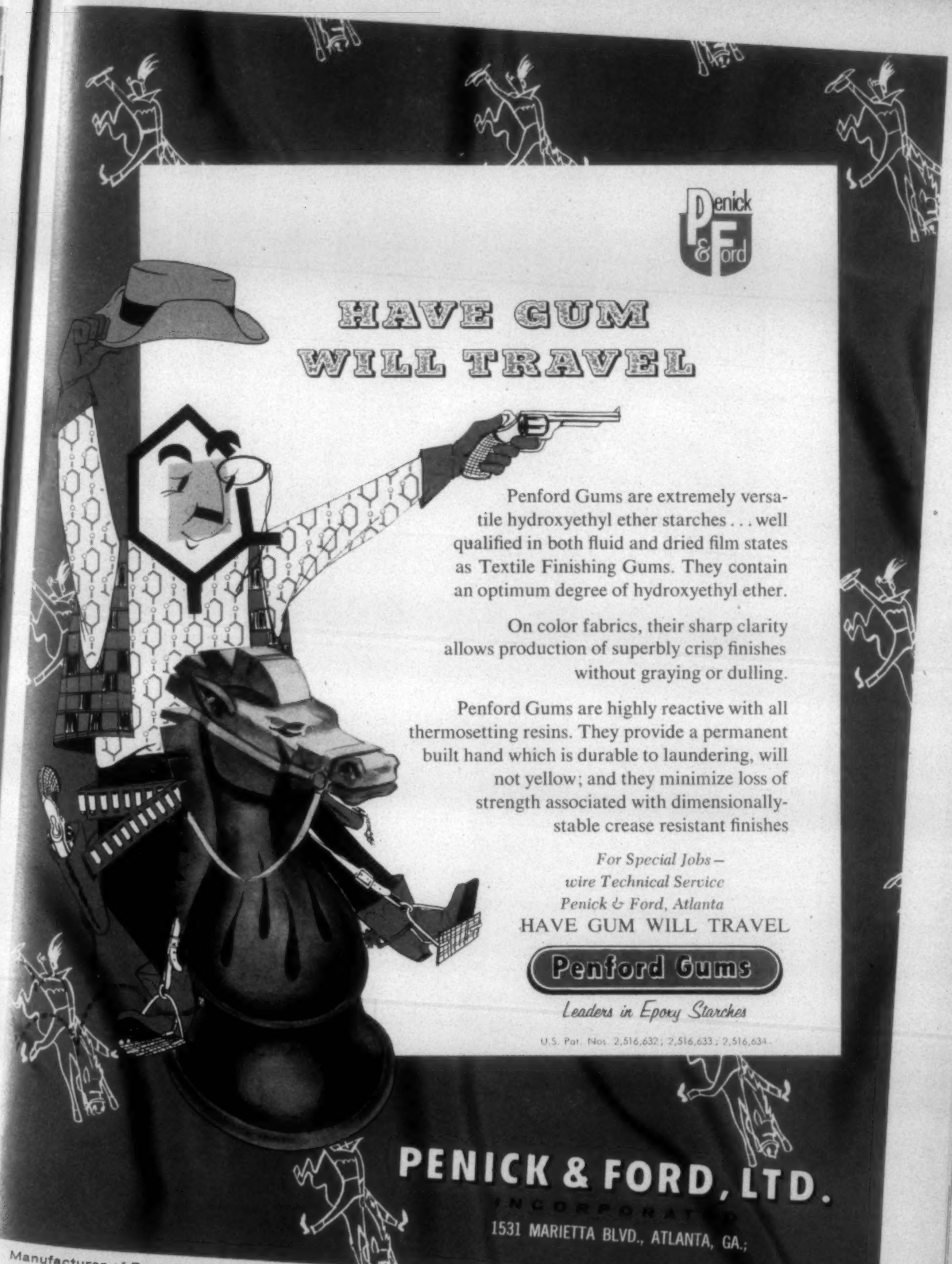
◀ In same mill room, humidity control in foreground — window exhaust vents in background.

AMCO

SINCE 1888

AIR CONDITIONING EQUIPMENT

AMERICAN MOISTENING COMPANY, CLEVELAND, N. C.
Branches: Atlanta, Ga. • Providence, R. I. • Toronto, Ont.



HAVE GUM WILL TRAVEL

Penford Gums are extremely versatile hydroxyethyl ether starches . . . well qualified in both fluid and dried film states as Textile Finishing Gums. They contain an optimum degree of hydroxyethyl ether.

On color fabrics, their sharp clarity allows production of superbly crisp finishes without graying or dulling.

Penford Gums are highly reactive with all thermosetting resins. They provide a permanent built hand which is durable to laundering, will not yellow; and they minimize loss of strength associated with dimensionally-stable crease resistant finishes

For Special Jobs —
wire Technical Service
Penick & Ford, Atlanta

HAVE GUM WILL TRAVEL

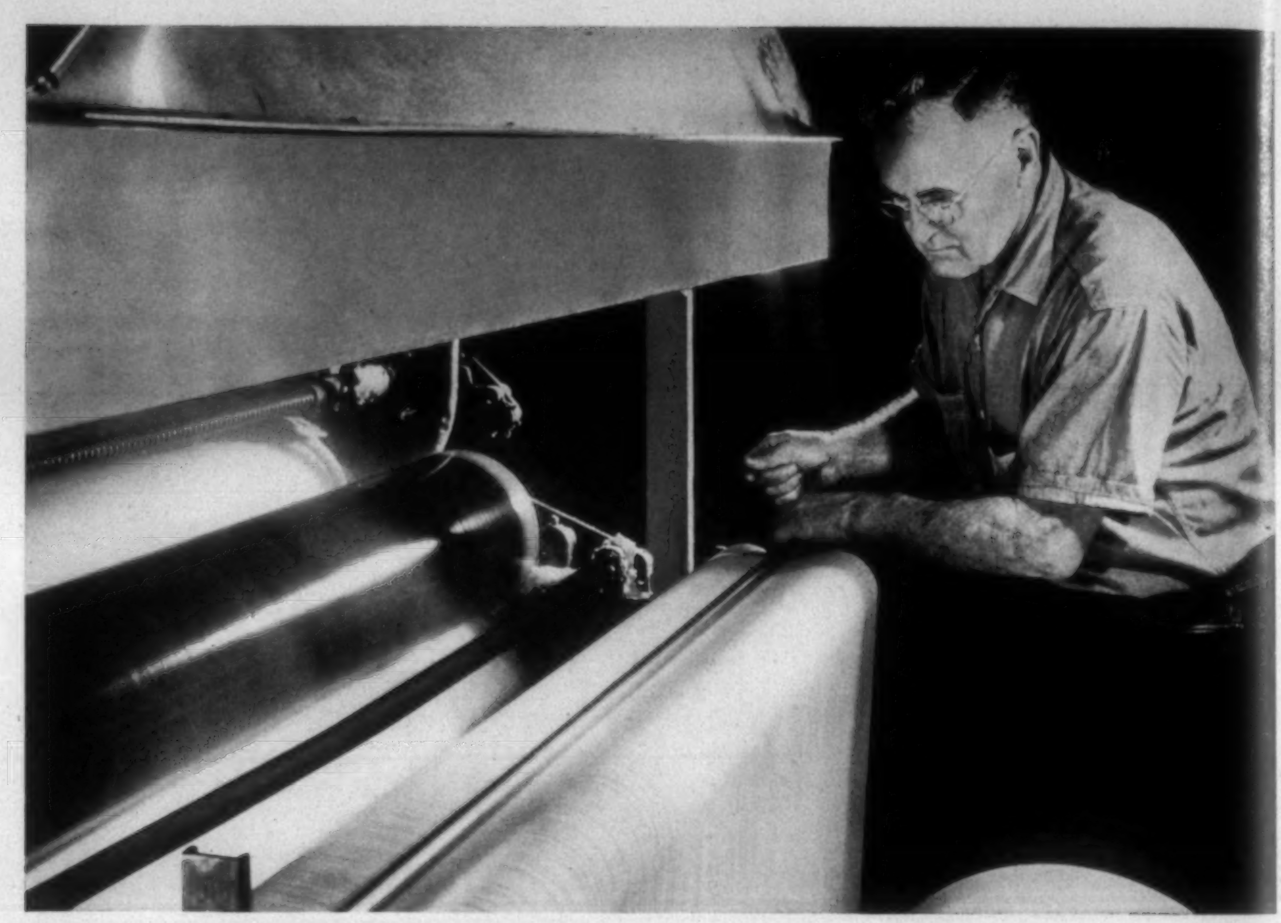
Penford Gums

Leaders in Epoxy Starches

U.S. Pat. Nos. 2,516,632; 2,516,633; 2,516,634.

PENICK & FORD, LTD.
INCORPORATED
1531 MARIETTA BLVD., ATLANTA, GA.;

Manufacturer of Douglas Pearl • Crown Thin Boiling • Douglas Dextrines • Clearsol Gums for the Textile Industry



How Modern Mills Improve Slashing Operations

Time after time, mills around the country report greatly improved slashing operations with TEN-O-FILM starches. Compatible with most adjuncts and available in a wide range of fluidities, TEN-O-FILM users praise its many unique operating advantages.

TEN-O-FILM is ready to use after cooking thirty minutes. Many mills find need for less plasticizer than with conventional starches. The stability of TEN-O-FILM keeps size usable despite prolonged heating and cooling. Size made with TEN-O-FILM does not congeal or "skin over" at lower-than-normal temperatures . . . it can be held for reasonable shutdown period without gelation.

TEN-O-FILM offers several additional features including unequalled clarity of film, economy in desizing and dyeing.

Our technical service group has had wide experience and marked success in adapting this versatile starch to the varied needs of many textile applications. The production advantages and process improvements achieved by TEN-O-FILM can be fitted to your needs by consulting our textile technicians. Contact our nearest sales office or write direct.

TEN-O-FILM® starches

Other fine products for the Textile Industry: EAGLE® • FOXHEAD® CLARO® • GLOBE® starches • GLOBE® and EXCELLO® dextrines

CORN PRODUCTS SALES COMPANY 17 BATTERY PLACE, NEW YORK 4, N.Y.

Spartan Mills leads with NEWEST in Frame Cleaning

To keep more frames cleaner than ever before, Spartan Mills is first with the newest combination for cleaning:

① **BAHNSON CROSS-JET CLEANER**

- Flexible trunks for each side of frame clean creel, drafting system, and frame. Multiple air nozzles in trunks provide total frame cleaning.
- High air handling capacity with adjustable air volume for each area of frame.
- Oscillating air outlets provide 180° overhead cleaning, plus track and conductor bar cleaning.

② **BAHNSON VERT-I-RAIL TRACK**

- First modern creel-mounted, single rail I-beam track offered for frame cleaners.
- Wider surface for wheel contact results in minimum track wear, maximum track life.
- Shielded conductors are open at top and bottom for easier air cleaning and maintenance.

Bahnson AIR-O-MATION

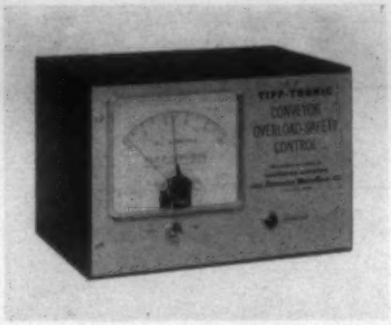
AIR AT WORK FOR INCREASED PROFITS

THE BAHNSON COMPANY, WINSTON-SALEM, N. C.

For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Conveyor Safety Control



This new conveyor overload safety control is being offered by The American MonoRail Co. as a component of its two conveyor systems or for installation on existing conveyors.

A conveyor overload-safety control is now being distributed by the conveyor division of The American MonoRail Co., Tipp City, Ohio. The control is said to be so responsive that one man can stop the conveyor by pulling on a trolley hanger, if such a sensitive adjustment is desired.

The Tipp-Tronic control will be sold by American MonoRail as a component of its two conveyor systems, the Chainless and the Cable-Way. The control can be used on any type of conveyor with electric motor drive.

The control's ammeter visually measures the conveyor line pull by monitoring the current drawn by the drive motor or motors. The safety-shut-off point on the ammeter is determined by operating a properly lubricated conveyor under normal load, and setting the limit pointer slightly above the normal reading. If the line pull exceeds this limit, the conveyor motor is shut off instantly. The control is self-compensating for motor starting surges.

Cited advantages of the safety control are: greater safety for personnel; protection against under-lubrication; prevention of damage to conveyor or drive due to "hang-up"; warning of broken or jammed trolleys; and protection of drive motors. Bulletin CD-3, describing the control is available. (Request Item No. I-1)

Washer-Extractor

The availability of its new 60-lb. dry-weight capacity combination laundry washer-extractor has been announced by the Pellerin Milnor Corp. of New Orleans, La. The manufacturer states that this new machine is of the open end, open pocket design, eliminating the need for weighting or dividing the load which not only greatly reduces loading and unloading time — but also permits much better washing quality with shorter washing formulas due to the superior washing action of open pocket washers.

The new machine is said to employ a patented hydraulic balancing principle which minimizes extraction vibration and therefore permits higher extraction speeds with correspondingly lower moisture retention.

The new 60-lb. machine is a companion to Milnor's 25-lb. open pocket washer-extractor, and has been developed in response to widespread customer demands for larger efficient open pocket combination washer-extractors. The operator needs merely load the washer, then return at the end of the wash-extract cycle to unload it. All functions incidental to washing and extraction are performed entirely without operator attention. Also featured on the machine is Milnor's center fill water inlet connection which permits the operator to take the fullest advantages of spray rinsing and short duration intermediate extractions.

(Request Item No. I-2)

A. C. Motors

A new line of integral horsepower a.c. motors has been introduced by Reliance Engineering Co., Cleveland, Ohio. The new units are called Reliance Duty Master motors. Now available in sizes from one through 250 h.p. in protected (open), weatherproof, totally-enclosed, corrosion-proof and explosion-proof enclosures, the new Duty Master motors may be specified in all standard speeds and voltages. Designs include polyphase, ball bearing, vertical and horizontal mounting arrangements with feet or footless, with NEMA C-face, D-flange or P-base brackets. New single-phase motors, sleeve bearing motors, resilient mount motors and larger re-rated sizes in the Duty Master design will be introduced in the coming months.

(Request Item No. I-3)

Wash-And-Wear Starch

A new dialdehyde starch, marketed under the name Sumstar, may prove important in the wash-and-wear field. The manufacturer, Miles Chemical Co., Elkhart, Ind., says that investigations have indicated that the starch should provide resistance to both shrinkage and creasing by serving as a cotton cellulose cross-linker. It may also improve abrasion resistance and tensile strength, increasing durability. Finishes utilizing Sumstar in place of ordinary or modified starches should be more resistant to laundering, Miles reports, since it forms chemical bonds with the cellulose and other fibers.

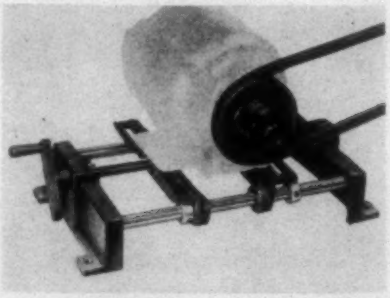
Sumstar was originally developed by the U. S. Department of Agriculture's Northern Research & Development Division. Further development has been taken over by Miles Chemical. The company reports that working samples of the chemical have gone out to the textile industry where the performance of the product is being evaluated. It is suggesting that Sumstar be investigated as a combination sizing agent and cross-linker, eliminating the need to wash out sizings after fabrics are woven.

The starch is being offered in three types: Sumstar S—over 90% oxidized; Sumstar R—75 to 80% oxidized; and Sumstar J—50% oxidized. The chemical is a fine powder, almost colorless, non-volatile, odorless, and of extremely low acute toxicity. (Request Item No. I-4)

Thermosetting Resin

Crown Chemical Corp., Providence, R. I., has announced the development of C-TRON, a new low formaldehyde thermosetting resin which is said to solve the problem of formaldehyde odors. According to Crown, the new resin's low free formaldehyde content has even made it possible for some finishers to eliminate the afterwash process. C-TRON is said to impart a high quality crease and shrink resistance to both natural and synthetic fabrics. (Request Item No. I-5)

Variable Pitch Pulleys



Maurey Mfg. Corp. has introduced this new variable pitch pulley which automatically adjusts to various pitch diameters.

A line of variable pitch pulleys featuring a spring tensioned sliding flange that automatically adjusts to various pitch diameters and is said to always hold the belt firmly has been introduced by Maurey Mfg. Corp., Chicago, Ill. The new pulleys are generally mounted directly on the motor or driver shaft and are coupled by an A or B belt with a fixed diameter pulley to form the variable speed drive. Speed variation is accomplished by varying the center distance between the two pulleys. As the center distance shortens, the spring loaded variable pitch pulley automatically expands its pitch diameter to take up belt slack, keeping the belt taut, and firmly seated in

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ROBERTS COMPANY
SANFORD,
NORTH CAROLINA

WM-2 SANFORD, NORTH CAROLINA, U. S. A. 1959

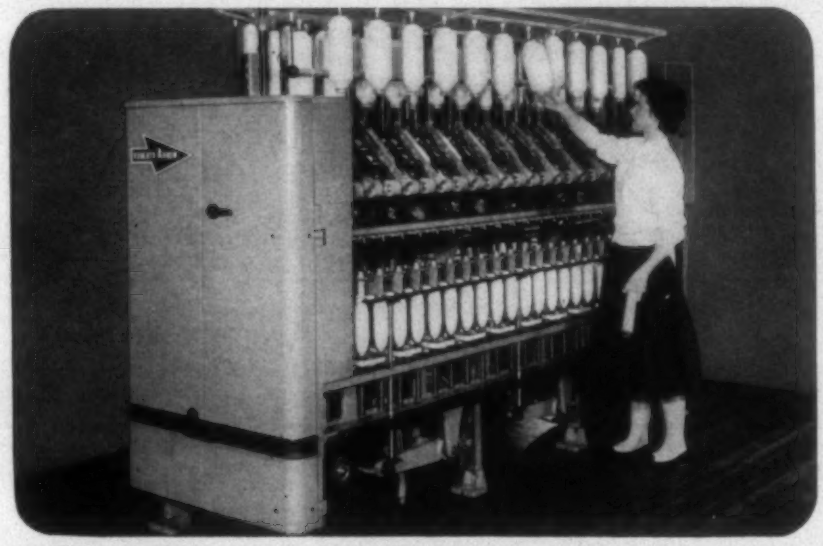
ARROW WM-2 LONG FIBER SPINNING FRAMES OFFER WIDEST YARN MAKING VERSATILITY

A dynamic program of new product design, advanced styling and aggressive merchandising is underway by all segments of the Textile Industry.

Knitting yarns of higher quality and greater interest are being called for in worsted, synthetics and blends. Finer weaving yarns up to 2 ply 80's are being called for and a great many blends are currently being explored. The longer fibers are in wide demand and the next few years should see a substantial boom in this field.

The demand for high bulk knitting yarns and the finer weaving yarns plus all of the newer fabric effects being created require fiber lengths from 3 to 8 inches long.

ARROW WM-2 frames are suitable for making yarns in any fiber length from 1½ to 8 inches. They provide great versatility in handling 100% synthetics, blends of synthetics, 100% worsteds and blends of worsted with synthetics in this range. Better quality yarns with greater evenness, bigger package sizes and higher production speeds are produced on ARROW frames.



- Spins yarn from any natural or synthetic fiber or any blend.
- PermaSet Drafting handles any fiber length from 1½ to 8 inches
- No roll setting changes needed at any time
- Great versatility for changing yarn numbers, twist, draft, ring size, and spindle speed
- Drafts as high as 24 on worsted, 60 on synthetic
- Produces yarn with better evenness and greater breaking strength
- Ball bearing top and bottom rolls eliminate all lubrication in drafting zone
- Almost ideal spinning conditions from delivery roll to spindle
- Runs at higher front roll, traveler and spindle speeds
- Reduces ends down by more than 50%
- Puts twice as much yarn on the bobbin as older frames
- 12-inch bobbins reduce winding costs
- Very rugged, most durable machine ever built for yarn spinning
- Frame is built in the wide-stance 36-inch width
- Uses ball bearings at every moving, turning or oscillating motion
- Substantially lowers electric power consumption
- AeroCreel for single or double roving
- Frame arranged for practical application of overhead cleaning and vacuum floor sweeping

Roberts ShortFlo System for Making Long Fiber Yarns

Roberts Company offers complete technical service in adapting its ShortFlo System for the production of long fiber yarns. This includes the complete yarn manufacturing process starting with tow converters, blending machines, pin drafting, roving frames, spinning frames, winders and twisters.

Where mills have existing equipment, full consideration is given to utilizing it whenever possible. Or, if a new long-fiber program is planned, all machinery can be specified, and the complete yarn organization set up.

The ShortFlo System for making long fiber yarns requires a minimum number of processes. Many doublings are provided to insure exceptionally good blending of fibers, improved evenness and better strength.

UPGRADING PRODUCTION

Careful records prove that National-Sterling Ring Travelers not only upgrade production but boost yarn quality to new levels. Here's why:

Our sales engineers make field tests in your own mill before recommending any particular weight or style of traveler. No detail is left to chance . . . no "make-do" substitutes are considered. The final choice is the *right* traveler — a traveler which will consistently deliver more pounds of first class yarn, at higher spindle speeds, with fewer ends down. And the records prove it.

Why not prove it for yourself? Whether you're running cottons, wools, synthetics or blends, let an experienced National-Sterling Engineer help you select the *right* ring traveler for your particular requirements right in your own mill. Write, wire or phone National Ring Traveler Company and Sterling Division, 354 Pine Street, Pawtucket, R. I. Southern Office and Warehouse: P. O. Box 293, Gaffney, South Carolina.

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Export Agent: A. M. ROMERO CORP., 350 Fifth Ave., New York 1, N. Y.

the pulley. As the center distance is lengthened between the pulleys, the pull of the belt on the spring loaded pulley brings a gradual contraction of its pitch diameter. Thus, the belt rides high on the spring loaded pulley in short center, high speed operations, and rides deep in the widened groove on lengthened center, low speed work.

The Maurey spring loaded pulley easily mounts on any standard motor. It is designed to work with A or B belts in drives within the ⅛-h.p. to 2-h.p. range. A special motor base designed to permit easy and accurate sliding of the motor to and away from the driven shaft can also be furnished. (Request Item No. I-6)

Dacron-Cotton Size Binder

A new resin binder for sizing Dacron-cotton warps is available from E. F. Houghton & Co., Philadelphia, Pa. Called Rezosol 1460, the new polymer is supplied as a liquid and can be added without special precautions when the size is prepared.

Among the advantages of Rezosol 1460 reported by the supplier are kettle cost reduction of over $12.00 per 200-gallon batch of size, reductions in seconds and shedding, improved separation, and up to 100 yards of warp per beam.

A large Southern mill weaving a 65% Dacron-35% cotton blend is reported to have pushed weaving efficiency from 83% to 94.6% during a field trial of the new binder. During this period seconds dropped from over 7% to under 3%.

(Request Item No. I-7)

Cloth Slitting Machine

Eastman Machine Co. is offering this improved version of its table-type cloth slittin machine.

An improved version of the table-typ cloth-slitting machine has been introduced by Eastman Machine Co., Buffalo, N. Y. This new machine features a 7½" round knife that provides from 6 to 7½" mo cutting edge than does the usual 5 or 5½ knife found in machines of this type. The extra-length cutting edge gives longer u of the knife, and requires considerably le sharpening. The result, it is claimed, more cutting at lower cost.

(Request Item No. I-8

Test Chamber

The Electric Hotpack Co., Philadelphia, Pa., has introduced a new controlled environmental chamber for textile ageing and

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the New WHITIN
PIEDMONT
SPINNING FRAME

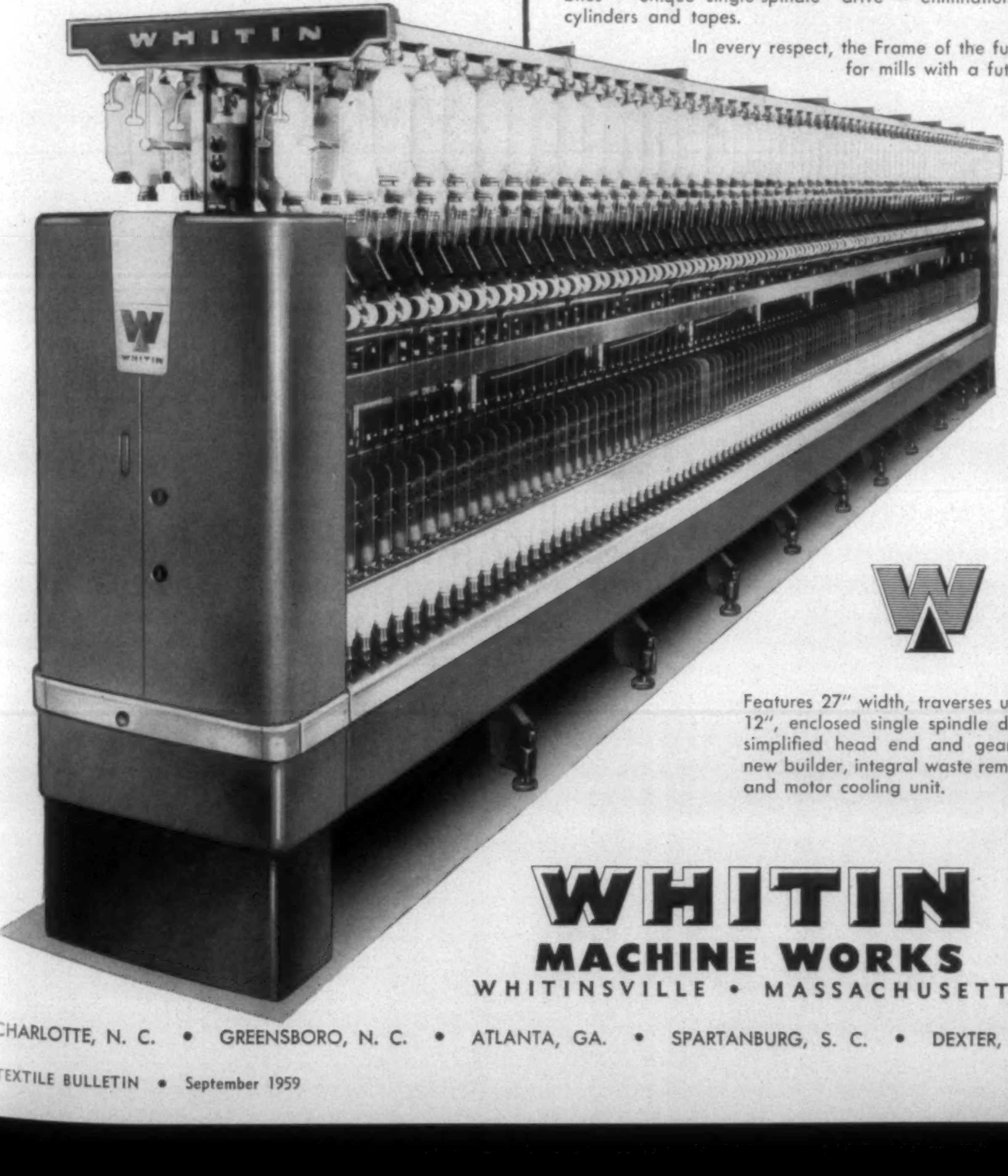
IN the new PIEDMONT, Whitin offers you a Spinning Frame which is not only smart in appearance, not only advanced in design — but which is also foremost in economy of operation. There are PIEDMONT benefits in every phase of your spinning operation.

PRODUCTION: Increases in front roll speed of 25 to 30% more than *average* production — and up to 15% more than *top current* levels.

PERFORMANCE: Simple construction with "built-in" efficiencies — straight line spinning plus SUPER-DRAFT for quality yarn — large "control-wound" packages for reduced spooling costs.

MAINTENANCE: Lowest cleaning costs possible thru streamlining — open construction — ball bearing assemblies — unique single-spindle drive — elimination of cylinders and tapes.

In every respect, the Frame of the future for mills with a future!



Features 27" width, traverses up to 12", enclosed single spindle drive, simplified head end and gearing, new builder, integral waste removal and motor cooling unit.

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deterioration tests. The unit is designed with temperature ranges to 100° C. and humidity ranges to 98% r.h. Textile samples are packed into a mixture of destructive microbiological organisms and are placed in the chamber for an extended period at 29° C. and 90% r.h. The samples are then analyzed for destructive effects of this accelerated ageing cycle.

The device features integral heat and humidity systems, indicating-temperature and humidity controller, automatic over-temperature protection and full-length door window. Cabinets are available in rust-proof enamelled or polished stainless steel. The working chamber is heavy gauge stainless steel. (Request Item No. I-9)

Vinyl Ball Valves

The Jamesbury Corp., Worcester, Mass., has developed a line of rigid vinyl ball valves for use in piping systems where corrosion is a problem. Except for the seats and seals, the valves are made of Geon, a vinyl material supplied by B. F. Goodrich Chemical Co. The material is said to offer superior resistance to oils, acids, alkalies and most chemicals.

The valves are available with threaded ends, weld ends or flanges. They are self-compensating for changes in pressure or temperature. Galling or seizure are said to offer no problem. Lubrication is unnecessary. (Request Item No. I-10)

Stearone Coating

Argus Chemical Corp. has introduced Stearone, a water-repellent coating and a softening and batching aid. Stearone, a symmetrical high molecular weight aliphatic ketone derived from stearic acid, is highly inert and subject to only a few reactions under vigorous conditions. It is said to be unaffected by high temperatures, acids, alkalis and other strong chemicals. Stearone is insoluble in water and has essentially no water absorption. It is incompatible with a variety of resins, polymers and organic solvents at room temperature, although compatible at elevated temperatures (thus Stearone is valuable as an anti-block agent.) Technical data and samples of Stearone are available. (Request Item No. I-11)

For the Mill Bookshelf

Gearmotors

A new 32-page bulletin on gearmotors has been issued by the Jones Machinery Division of Hewitt-Robbins Inc. The bulletin contains technical information on horizontal and vertical mounted gearmotors with capacity up to 125 h.p. and a variety of output speeds ranging from 780 to 1.2 r.p.m.

Included in the booklet is a load characteristics table for applications in various industries and different types of equipment, and a selection table arranged according to A.G.M.A. classifications.

(Request Item No. I-12)

Laboratory Ovens

Andrews & Goodrich, division of Midland-Ross Corp., Boston, Mass., has issued a brief descriptive bulletin covering two recently developed laboratory-size units: a continuous resin curing oven and a patch drying oven. Either unit will be modified in design to meet individual requirements.

(Request Item No. I-13)

Material Handling Wheel

Disogrin Industries Inc., Mt. Vernon, N. Y., recently released a new brochure on Disowheel, its material handling wheel. Four pages in length, in two colors and heavily illustrated, the folder describes the wheel's characteristics and advantages through the employment of case histories.

Several new features appear in the brochure: A reproduction from an industrial publication of a chart which compares the wheel's tread, Disogrin, with other wheel tread materials; a section on press-on type Disowheels; and a list of some companies who are using Disowheel.

(Request Item No. I-14)

Finishing Compounds

A data file catalog describing its complete line of textile finishing compounds has been published by the Onyx Oil & Chemical Co., Jersey City, N. J. The catalog features a concise description of each compound and it is indexed by product classification.

The data file serves as a permanent catalog. Supplemental pages will be issued from time to time to describe new products and changes. (Request Item No. I-15)

High Bulk Orlon

A technical information bulletin, OR-9, describing the manufacture of high bulk Orlon acrylic fiber by the Turbo Stapler was recently released by the Du Pont Co., Wilmington, Del. Orlon tow processed on the Turbo stapler has several unique properties. Drawing imparts a high shrinkage characteristic to the fiber, which permits the manufacture of high bulk yarns now in demand for many types of knitted outerwear. Regular yarns, of 100% relaxed fiber, are also popular because drawing results in a more oriented product with a soft hand, fine denier and superior surface covering properties.

In the high bulk yarns, two components

e present: a high shrinkage fiber which ulls in toward the center of the yarn ndle when exposed to boiling water or eam, and a low shrink fiber which buckles d forms loops as it is pushed out to the rface of the yarn bundle by the action the high shrinking fiber. The increase yarn diameter which results is propornately greater than the increase in rn weight.

Major emphasis in the bulletin is placed n the variables affecting shrinkage of Orlon yarns. These are: draw ratio, coolng, heater plate temperature and machine peed. Also discussed is relaxation of Orlon liver in the Turbo Fiber Setter.

(Request Item No. I-16)

Defoamer

Emkay Chemical Co., Elizabeth, N. J. s now offering a 4-page brochure describing fully its new Emka Defoam. It is recommended for low cost foam and froth control. The substance is water dispersible, effective in acid and alkaline mixtures and is compatible with most systems. It comes in liquid form for easy handling.

Emka Defoam is recommended for industrial operations compounding adhesives, coatings, paints, resins, latex, etc. It is said to be beneficial in various procedures and processes such as scouring, dyeing, printing and finishing of textiles. The standard package is a 400-lb. open head drum. (Request Item No. I-17)

Monorail And Cranes

The Louden Machinery Co., Fairfield, Iowa, has published a 52-page booklet entitled "Cost-Cutting with Monorail and Cranes." The publication shows the application of the firm's materials handling equipment in a large number of industries. Included is a 4-page section showing its equipment in use in textile mills. An introductory section describes the different types of systems, track, track accessories, trolleys, hoists, controls, etc.

(Request Item No. I-18)

Lift Truck Engineering

Creative lift truck engineering, new functional styling and improved operating features embodied in a new Pace-Maker series of fork lift trucks manufactured by Towmotor Corp., Cleveland, Ohio, are discussed in a new booklet called "The Inside Story," currently available to lift truck users. (Request Item No. I-19)

Variable-Speed Pulleys

A new revised bulletin has been published by T. B. Wood's Sons Co., Chambersburg, Pa., describing its line of variable-speed pulleys designed to eliminate freezing and sticking. This 12-page, 2-color, letterhead-size bulletin gives technical data for five sheaves designed for ratings of 2, 3, 5, and 15 h.p. Power is transmitted from the stationary flange through a removable sleeve cap, which is keyed to the moving flange by torsionally resilient rubber keys. A continuous rotational pumping action assures a uniform, constantly renewed film of oil on the bearing surfaces.

(Request Item No. I-20)

Urea Resin

Reichhold Chemicals Inc., White Plains, N. Y., has published Technical Bulletin T-4 describing the features of its urea formaldehyde textile cream resin Fabrex M P-613-M. The formula is a monomeric urea formaldehyde resin in a uniform, smooth paste form. It is used for crease-resistant and shrinkage-control finishes on spun rayons, rayon suiting, and blends of spun rayon with acetate, cotton or wool. It is said to be compatible with most softeners, dye fixatives and other commonly used additives.

The bulletin covers specifications, usage, application, drying, curing, washing, use with starch finishes, removal, and a table of formulations. (Request Item No. I-21)

Floor Cleaning

"Industrial Floors: How to Clean and Care for Them" is the title of a booklet recently published by Oakite Products Inc., New York City, manufacturers of cleaning and sanitizing compounds for industry.

Oakite has compressed into this booklet its 50 years of experience in the cleaning of industrial floors of every kind. The booklet F10593, contains chart lists of cleaning compounds and descriptions of cleaning methods. Methods of sanitizing,

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stripping wax and paint, and of absorbing liquids are also discussed.

(Request Item No. I-22)

Oil And Gas Burner

A new 6-page folder on its mechanical pressure atomizing oil and nozzle-mix gas burner has been published by Boiler Engineering & Supply Co., Phoenixville, Pa. Three full-page drawings describe complete construction features and principle of operation of the compatible combination oil and gas burner with which the Continental automatic "package" boiler is equipped. Simple in design and non-critical in operation, it is said to be the most foolproof to operate and easiest to maintain of any burner system with which commercially available automatic boilers are equipped.

Flow of both main fuels and primary and secondary combustion air supplies are clearly pictured. Flame monitoring and control systems are shown in detail and labeled for easy identification and instruction. The ignition system is also shown.

Full-page burner views show the burner in normal operating position and also with the burner assembly conveniently swung open, readily accessible for easy inspection and cleaning on its hinged mounting. A third view is from the fireside. Also pictured is a cutaway illustration showing the burner system installed on a 400 h.p. Continental automatic "package" steel firetube boiler. (Request Item No. I-23)

Spring Clutches

The Marquette Division, Curtiss-Wright Corp., Cleveland, Ohio, has announced the publication of a new catalog describing five standard lines of spring clutches in bore sizes from 1/8 to 1" and torque capacity up to 1,250 pounds-inches. These spring clutches are specifically designed for use in machinery, equipment and instrument applications utilizing drive up to 5 h.p.

There are five basic series of clutches offered in the 30-plus page catalog: Series A, over-running and back-stopping; Series B, indexing; Series C, on-off; Series D, on-off indexing; and Series E, safety lock control. The catalog, which lists specifications of each clutch, also has technical and application data along with illustrations that aid in selecting the correct type and size of each series for the required application. (Request Item No. I-24)

Roller Chain Couplings

A recently revised bulletin on roller chain flexible couplings—Bulletin 597—has been published by Chain Belt Co., Milwaukee, Wisc. The bulletin outlines the features that are wanted and needed from a flexible coupling including: simple, all-steel construction that assures long life and maximum service; accommodation of angular and parallel misalignment with minimum backlash; and easy installation or removal.

In addition, the bulletin carries information on how to properly select Rex flexible couplings and illustrates installation and maintenance procedures.

(Request Item No. I-25)

Fretting Corrosion

T. B. Wood's Sons Co., Chambersburg, Pa., has announced the availability of a new bulletin, "Licking Fretting Corrosion in Variable-Speed Sheaves." Authored by Eldon L. Nuernberger, the firm's chief engineer, the bulletin, No. 7102, discusses several ways in which wear by fretting corrosion can be controlled.

(Request Item No. I-26)

Fiber Reactive Dyes

Arnold, Hoffman & Co., Providence, R. I., has published a list of its present line of Procion dyestuffs, noting that the number of the dyes has now reached 26. Now available are: Procion Yellows RS and HAS; Brilliant Yellows 6GS and H5GS; Brilliant Oranges GS and HGRS; Brilliant Reds 2BS, 5BS, H7BS and H3BS; Red GS; Rubines H2BS and BS; Scarlets H3GS and GS; Violet H2RS; Turquoise HGS; Blues 3GS and

The ULTIMATE in PACKAGE DRYERS

GASTON COUNTY-AVESTA recirculating RAPID DRYERS are built under U. S. Patent No. 2,567,940 and R.E. 24,260 through a license agreement with Avesta Company in Sweden.

Custom built to individual mill requirements in "Single Kier" or "Multiple Kier" arrangements for 250 to 1,000 or more pounds of yarn. Design determined by package carriers in customer's plant regardless of make.

CONSTRUCTION

Built to ASME standards. Piping systems, heater housings, condenser housings, reversing valves and drying kiers made of stainless steel. Kier lid of stainless or carbon steel as specified.

Heater and condenser coils made of heavy curpo-nickel alloy tubing for long service life.

Send for detailed technical data and drying cycles based on your production.

ADVANTAGES

1. Better yarn quality
2. Short drying cycles
3. Completely automatic operation
4. Low labor costs
5. Low power consumption
6. Low steam consumption
7. Eliminates costly air filters
8. No contamination from atmosphere
9. Eliminates expulsion of hot air into dyehouse
10. Allows more efficient use of package carriers
11. Accelerates flow of material through dyehouse
12. Faster delivery of finished product to customer
13. Allows smaller inventory of finished goods
14. Reduces overall costs of dyehouse operation

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* An exclusive process of densification and impregnation that retains the elasticity, increases the strength, eliminates splitting from screw holes and crushing at lug hold-up.

HBS; Brilliant Blues RS, H7GS and HGRS; Printing Greens B and 5G; Black HGS; and, most recently, Procion Orange Brown HGS.

About one-half of these, designated by H, are recommended for hot dyeing processes while the others can be applied by the novel cold dyeing techniques peculiar to Procion dyes. The dyes may be used to produce a wide range of shades including the palest.
(Request Item No. I-27)

New Vat Dye

The General Dyestuff Co., New York City, a sales division of General Aniline & Film Corp., has published an 8-page circular which deals with the properties and applications of its new Indanthrene Corinth B Infra Paste, a vat dyestuff which is now being manufactured as a straight product for the first time. The new product is said to have excellent fastness properties, excellent dispersibility, good resistance to over-reduction, high leuco solubility and good dyeing properties. It has been found suitable for application on cellulosic textiles in any form by any of the various vat dyeing methods.

This new offering is reported to have proved of special convenience as a strong and economical component in the production of deep chocolate browns, purplish grays, and other combination shades where it is desired to get away from the yellow or green side. It may also be used in self shades ranging from lilac tints to full shades of grayish purplish red. The new dye is being employed for items that go into such end uses as table and bed linen, draperies, upholstery, toweling, washable dress goods and washable play clothing.

In addition to information on working properties, application data, and fastness properties, the new booklet (G-806) contains vat dyed cotton and rayon color swatches showing the various shades that may be obtained with the new dye.
(Request Item No. I-28)

Lift Trucks

Described in detail in a new 24-page booklet entitled "What Makes It Tick?" is the new Stream-Liner Series of fork lift trucks by Towmotor Corp., Cleveland, Ohio. The new units are said to offer increased operating efficiency, greater driver comfort and improved handling ease.

Among the new design features incorporated into the new lift truck models are a new lowered cowl which gives the operator full vision to the forks, on either side for fast, easy pick-up and deposit of heavy loads; a new "direct view" instrument panel; and a new treadle-type accelerator that cuts driver fatigue.

According to Towmotor engineers, all operating controls on the newly styled Stream-Liner series simulate those used on automobiles—to simplify operator training and use, and keep hand and arm motion to a minimum. The Stream-Liner trucks are available in eight different gasoline, diesel, or LP-gas-powered models, with lifting capacities ranging from 2,000 to 4,000 lbs.

Other construction features illustrated and described in the booklet include a standard mast assembly that provides 25½" of free lift; an oversize positive-action hydraulic pump that is said to provide faster, smoother lifting action; and double-acting hydraulic jacks that speed fork unloading operations and also "cradle the load" to compensate for steep up and down grades.

New safety and economy features covered include a fully protected fuel tank, a slip-type universal joint that is said to substantially reduce wear and servicing on vital parts by preventing transmission of shock waves to the bell housing and the engine, and Towmotor's exclusive Cool Flow Exhaust system specially engineered to dissipate sparks and flame in the event of engine backfiring. (Request Item No. I-29)

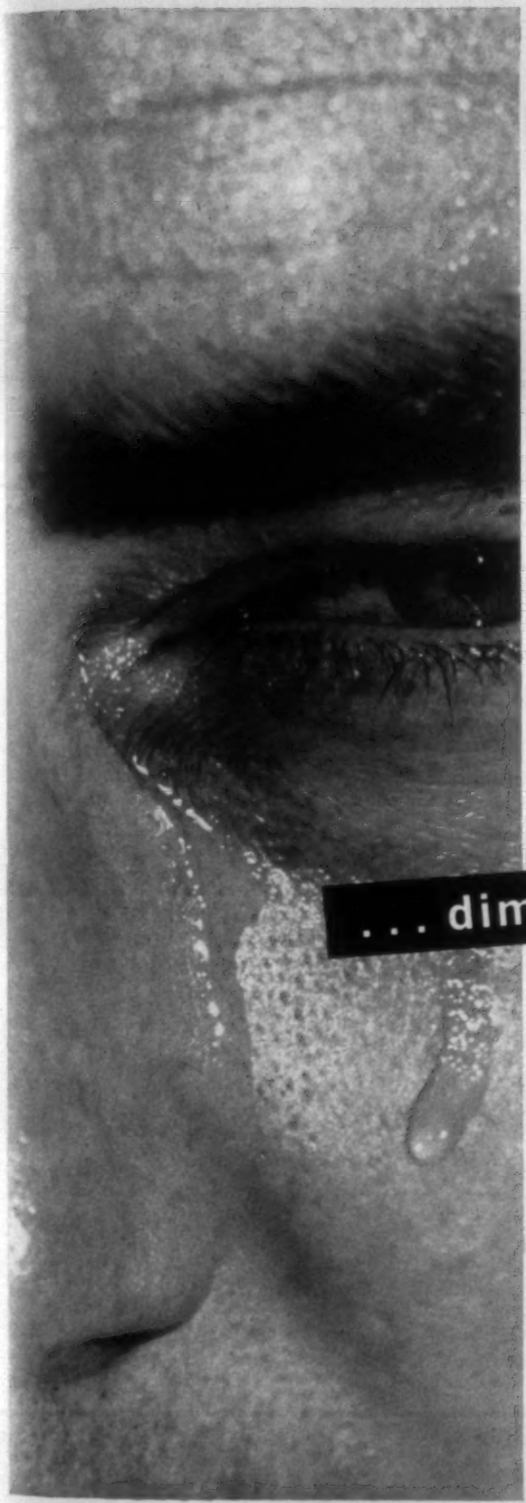
Cotton Industry Potential

"The Competitive Potential of the U. S. Cotton Industry" is the title of a book recently published by Harvard University's Graduate School of Business Administration. The book, authored by Clifton B. Cox and Vernon W. Pherson, concludes that "if the standards of living keep increasing and if the industry co-operates on programs of mutual help for all segments, the potential of cotton is great and the cotton industry can continue to be an important part of the American economy." Cox is professor of agricultural economics at Purdue University and Pherson is assistant professor in the same field at Purdue.

The book points out five factors which seem to be particularly important in the future competitive position of cotton. These factors are: per capita real income, price, quality, promotion and trade arrangements. By trade arrangements is meant all artificial factors which alter production, consumption and price from what they would be on a free market. This includes arrangements by individual companies, associations and governments or governmental agencies.

The authors point out that: The industry has become dependent on government action; competition from other fibers has increased; competition from foreign cotton has increased in the foreign market; production is inefficient; and mills are increasing the use of man-made fibers by substitution or blending. This brings about certain responsibilities: To improve production and handling methods of raw cotton to make it competitive in quality with foreign cotton and to a certain extent with man-made fibers; to price it competitively in both domestic and foreign markets; to improve end-use characteristics through research; to continue and expand promotion of cotton and cotton products; and to strive for legislation and governmental policy that will create a favorable environment for the growth of the industry.

The 201-page book contains an appendix of charts showing U. S. and foreign fiber consumption and production. It is available from the Harvard Business School, Division of Research, Soldiers Field, Boston 63, Mass., for $3.



CROWN'S NEW C-TRON

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IN CANADA: Marwin Dyestuff of Canada Ltd. IN SWITZERLAND: Bubeck & Dolder, Basle, Switzerland.

Serving The Textile Industry

Draper Corp. Shows Great Earnings Increase

Greatly increased earnings have been reported for the Draper Corp., Hopedale, Mass., in the first six months of this year. Consolidated net profits for the first half of 1959 amounted to $796,747 or 71 cents a share as compared with profits of $742,706 or 67 cents a share in the entire year of 1958.Thomas H. West, president, said the firm's financial position continues strong with a current ratio of assets to liabilities of 5.6 to 1. He reported that the company has completed its sixth installation of the new shuttleless looms. The regular quarterly dividend of 25 cents was declared by the company.

The Duplan Co. Reports Improved Financial Picture

The Duplan Corp. has reported a net profit of $649,000 or 66 cents a share for the nine-month period ended June 30. This compares with a loss of $239,00 in the comparable period last year. Sales for the nine months totalled $18,551,000, an increase of more than 18% over the total of $15,651,000 for the comparable period in 1958. No provision was made for taxes since the company had a net operating loss carry-forward.

Du Pont Employees Work Five Years Injury-Free

Employees of The Du Pont Co.'s Chattanooga, Tenn., nylon plant recently completed more than 28,750,000 man-hours on the job without a single lost-time injury to any employee. The plant operated with a perfect safety slate for more than five years to do it. Every day they work now adds to the total. There are more than 2,500 employees at the plant.

The achievement was officially recognized by the National Safety Council and was marked by a ceremony for all employees at the plant. Walter S. Carpenter Jr., chairman of the board of directors of the company; Crawford H. Greenewalt, president; Dr. Howard Pyle, president of the National Safety Council; and officials of the Du Pont textile fibers department were present to honor the employees.

Atlanta Solvents & Chemical To Distribute Antara Chemicals

The Atlanta Solvents & Chemical Co., Doranville, Ga., has been appointed distributor for Antara Chemicals, a sales division of General Aniline & Film Corp. Atlanta Solvents will handle distribution of General Aniline's Igepal CA and CO nonionic surfactants, Cheelox sequestering agents, as well as ethylene and diethylene glycols, providing bulk delivery of these chemicals throughout Georgia and adjacent territories. All products can be delivered in tank trucks of up to 6,000 gallons capacity or by compartmented tank trucks, permitting mixed bulk shipments of these and other liquid products supplied by Antara solvents. Customers may also make their own bulk pickups, or designate carriers of their choice.

Crompton & Knowles Shows Improvement In First Half

Crompton & Knowles Corp., Worcester, Mass., showed consolidated earnings, after taxes, of $592,322 or $1.36 a share for the first six months of 1959 as compared with $170,818 or 38 cents a share in the comparable period of 1958. Consolidated sales for the period were 20% above billings for the first half of 1958, the company reported (sales are not revealed). Deliveries this year of weaving equipment which was in development stages last year were said to have contributed to higher billings of textile machinery.

Industrial Rayon Converting Cleveland Plant To Tyrex

Industrial Rayon Corp., Cleveland, Ohio, expects to have its Cleveland plant converted from rayon tire cord to production of Tyrex viscose tire cord by the year end, according to Hayden B. Kline, president. Kline also stated that a further increase in Tyrex viscose cord capacity at the company's Painesville, Ohio, plant has been approved and should be substantially completed by the end of the year.

The demand for Tyrex viscose cord is strong and the supply-demand relationship in the textile rayon field is in better balance, Kline reported. Also textile rayon prices are about 8 % higher than those in effect at the end of the year 1958. These factors are expected to contribute to improvement in earnings during the second half of the year. The company recently reported a net income of $556,000, equal to 30 cents a share, for the first six months of 1959. This compared with a loss of 59 cents a share for the first half of 1958.

Johnson Motor Lines Acquires Atlantic States Motor Lines

M. E. Sheahan, president of Johnson Motor Lines, Charlotte, has reported that pursuant to an order of the Interstate Commerce Commission, Johnson has acquired the capital stock of Atlantic States Motor Lines. Atlantic States, a North Carolina corporation, was incorporated in 1934 and was one of the pioneer motor carriers of the Southeast. Johnson has exercised management control of Atlantic States under ICC authority since February 1958.

Atlantic States serves generally the states of Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New York, New Jersey and th District of Columbia. Johnson serves Geo gia, the Carolinas, Maryland, Delawar New Jersey, Pennsylvania, New York, Connecticut, Massachusetts and Rhode Islan Johnson serves no points intermediate between Greensboro, N. C., and Baltimor Md. Atlantic States serves this area wit Richmond, Va., as the dividing point between the North and South.

Johnson Motor Lines reports that it ha experienced a decade of remarkable growt though its operating authority limits principally to the transportation of textil products northbound.

Dow Corning Corp. Moves Two Sales Office Sections

A new location for two sections of Dow Corning Corp.'s New York sales office ha been announced by Earle J. Smith, branc manager. Fiber finishes sales and servic and the international department have established their respective offices in the new Corning Building at 717 Fifth Avenu New York 22, N. Y.

The fiber finishes sales and service grou is responsible for the New York area technical service and promotion of Syl-me grade silicone textile finishes. The new offices will have facilities for exhibiting th latest examples of finished fabrics and garments for the convenience of mills, finishers, manufacturers and retailers.

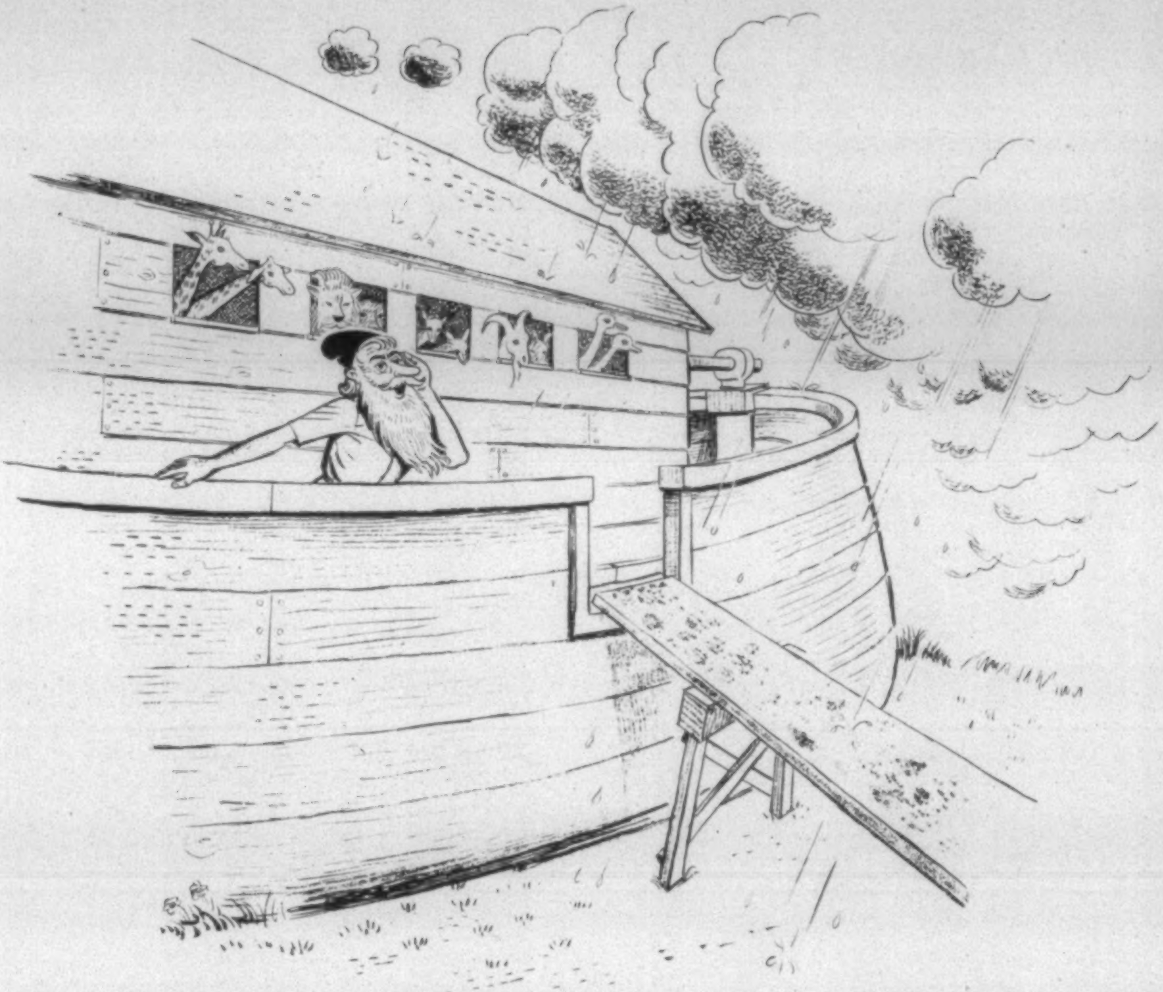
Union Carbide Corp. Not Exercising Option

Union Carbide Corp., New York Cit has announced that it is not going to exercise its option to purchase the Roanok Va., plant site of American Viscose Cor The firm reports that studies indicate tha a commitment on the site at this time woul not be advisable.

Celanese Corp. Reports Record Sales In First Quarter

Celanese Corp. of America, New Yor City, and domestic subsidiaries have reported sales totaling $68,687,892 for the thre months ended June 30, 1959, highest fo any quarter in the company's 41-year history. This year's second quarter sales wer 25% above the $54,822,291 sales volum of the same period last year.

For the first half of 1959, Celanese fiber chemical and plastic product sales amounte to $127,578,050, exceeding by 23% th $103,787,203 sales volume recorded durin the like 1958 period. The company reported net income after federal taxes of $10,445,088 for the first half of 1959, representing an 83% increase over the $5,701,345 earnings of the first six months of last year. The 1959 first-half income was equal



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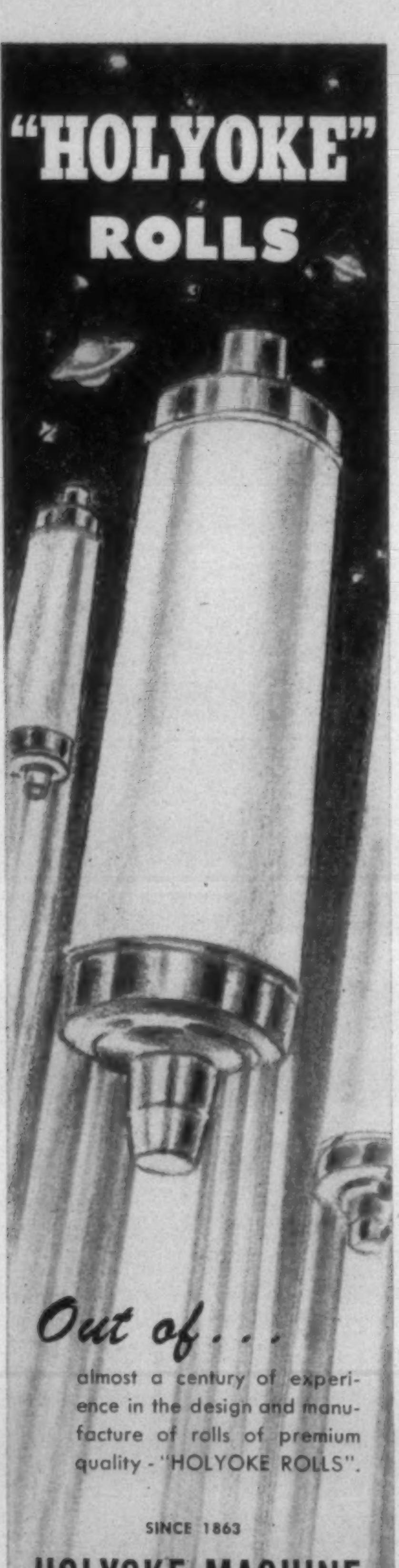
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to $1.38 a share of common stock, compared with last year's first-half earnings equal to 57 cents a share.

Before tax provisions, earnings for the first six months of 1959 were $22,045,088, representing a 114% increase over the $10,301,345 pre-tax earnings reported for the comparable period of 1958. For the three months ended June 30, 1959, company earnings amounted to $5,549,209, exceeding by 74% the comparable 1958 second-quarter earnings of $3,191,635. The report also presented details about the company's recent acquisition of a plant in Asheville, N. C., for the development and eventual production of high energy chemical fuels for rocket and missile propulsion systems. This was cited by President Harold Blancke as part of a continuing program to diversify and expand markets for Celanese chemicals.

Record Sales Reported By Air Reduction Co.

Sales of Air Reduction Co., New York City, for the second quarter of 1959 were a record $53,901,131, compared with sales of $42,363,939 during the second quarter of 1958—an increase of 27.2%. Second quarter 1959 net income was $4,068,153, compared with second quarter 1958 net income of $3,185,667, an increase of 27.7%.

Sales for the six-month period ending June 30, 1959, were a record $101,836,-859, compared with sales of $85,618,068 for the first six months of 1958, an increase of 18.9%. First half 1959 net income was $7,817,122 or $2.01 a share as compared with $6,556,383 or $1.71 a share for the first half of 1958, an increase of 19.2%.

Minnesota Mining & Mfg. To Construct Chemical Plant

Some 500 acres of land at Decatur, Ga., has been purchased by the Minnesota Mining & Mfg. Co. of St. Paul, Minn., for the construction of a $4.5 million chemical plant to serve the textile industry. The plant will produce fluorochemicals for the textile industry, and primarily Scotchgard. Scotchgard is a chemical which is applied to fabrics in order to make them oil, dirt and water repellent. Joseph C. Duke, executive vice-president of abrasives, adhesives and chemicals, will be responsible for the operation of the new unit. It will employ about 75 persons initially.

Du Pont Setting Up Polyethylene Plant

Plans for the Du Pont Co.'s first major plant for production of polyethylene film for packaging have been announced by the company. Installation of production equipment has begun and the plant, located at Richmond, Va., is to be ready to begin production early in 1960.

Du Pont's polyethylene film pilot plant at the Sabine River Works, Orange, Tex., is now turning out the packaging film, which is said to combine high impact strength with excellent appearance and printability. The new film will be available only in limited quantities until start-up of the new facilities at Richmond.

The company is now producing polyethylene film for industrial and agricultural applications in commercial quantities at its Yerkes film plant in Buffalo, N. Y.

To be operated as a unit of the present Spruance cellophane plant, the new production facilities will be located for the most part in existing buildings formerly used for rayon production. A 12,000-square-foot addition to these buildings will be constructed for production equipment. New facilities will be provided for testing laboratories of the Spruance textile fibers plant, which are now situated in the buildings to be used for polyethylene film manufacturing.

The Richmond plant will create about 170 new jobs when operations reach capacity. The facilities have been designed and will be installed by the company's engineering department.

United Elastic Corp. Reports Higher Earnings

Sharp increases were shown in the sales and earnings of the United Elastic Corp. for the first six months ended June 30. The company, with headquarters in Easthampton, Mass., reported sales gains of 42% and profit gains of 50%. Consolidated sales for the six months totalled $17,058,554 while net earnings were $2,217,705. Per share earnings in the six-month period were $2.41. Construction has begun on a plant in Bridgetown, Nova Scotia, following the board's approval of the formation of a Canadian subsidiary. The subsidiary will be known as United Elastic Ltd. The new plant is expected to be in operation by July 1960.

American Enka Raises Wages

Wage increases of from six to ten cents an hour for hourly employees have been put into effect by American Enka Corp. at its Lowland, Tenn., plant. Salaried employees were granted commensurate increases. The company offered the same increases to local 2598 of the United Textile Workers of American which represents hourly workers at the Enka, N. C., plant.

The company pointed out that the increases are voluntary since wage negotiations under the union contract are not open until 1960. The wage and salary adjustments affect more than 6,000 employees and will cost the company over $1 million annually. This is the second raise granted in eight months. The other was a five-cent-an-hour increase given in December.

National Starch & Chemical Reports Higher Sales, Earnings

National Starch & Chemical Corp., New York City, has reported increased sales and earnings for the six months ended June 30. Net sales for the period totalled $25,934,001 against $22,194,635 in the same period in 1958—an increase of 17%. Net income for the first six months of 1959 was $1,550,764 as compared with $1,350,723 in the first half of 1958—an increase of 15%. Earnings per common share for the 1959 period are 78 cents against 68 cents in 1959.

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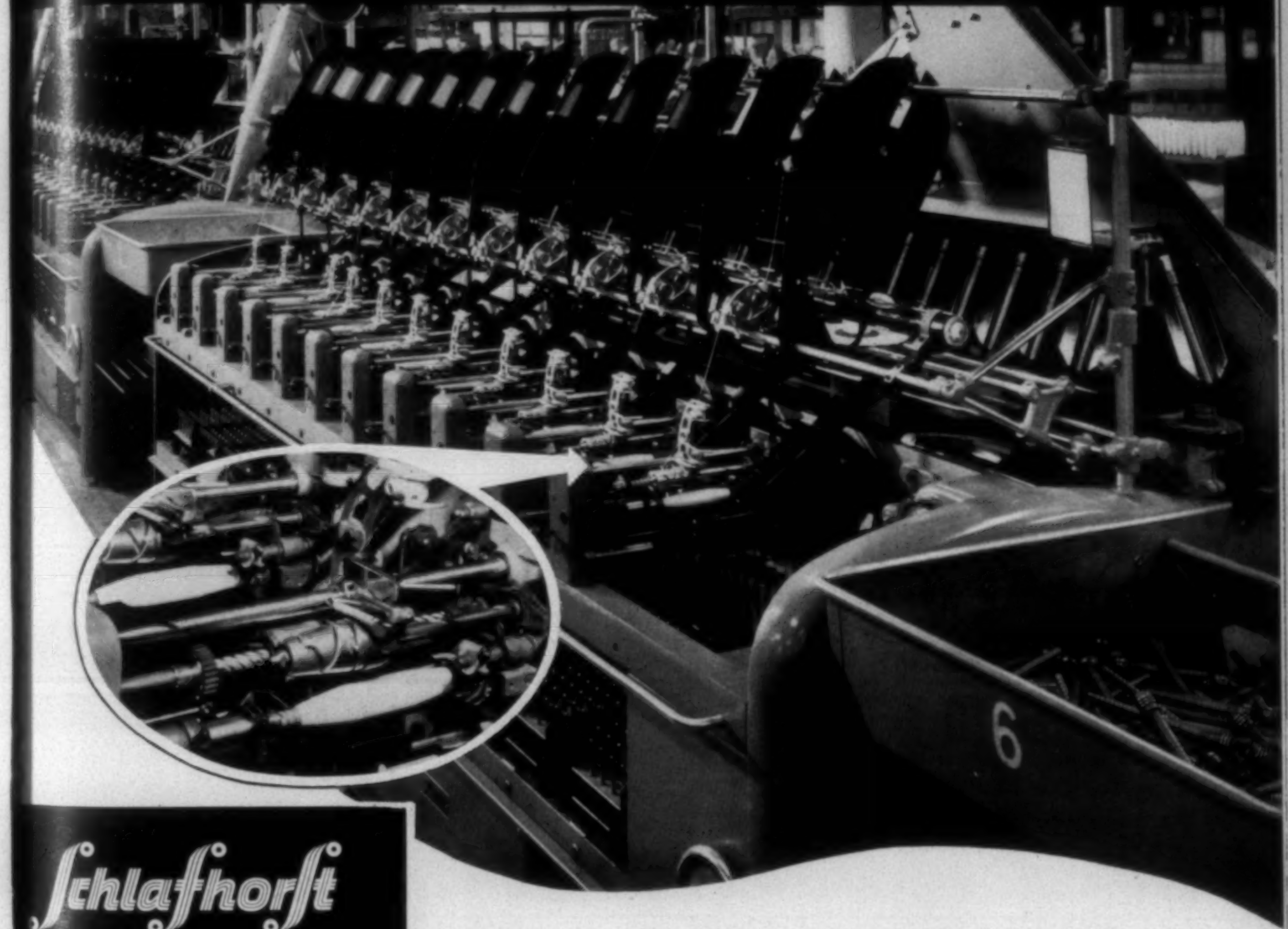

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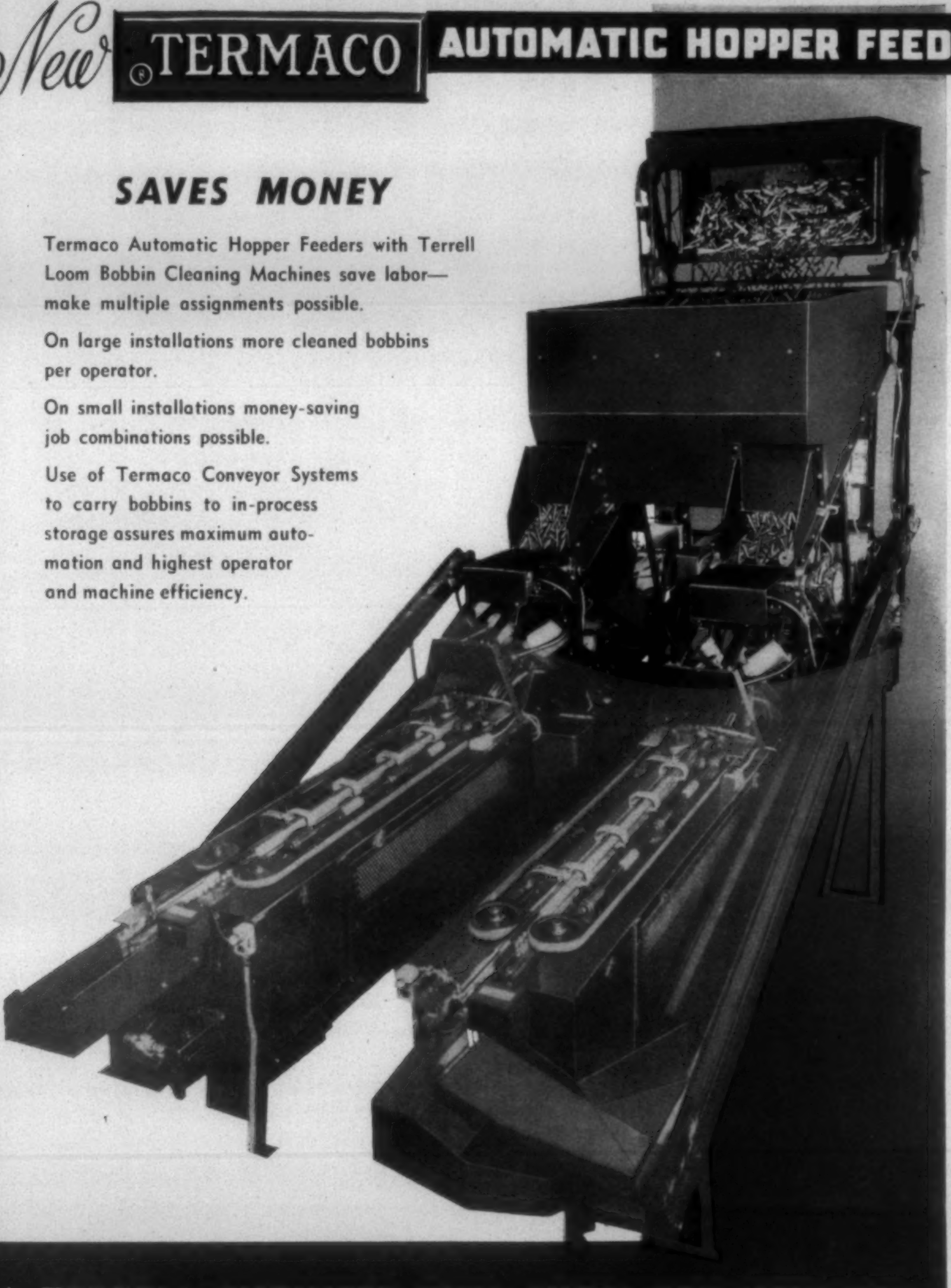

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textile bulletin

VOL. 85 SEPTEMBER 1959 NO. 9

THE U.S.D.A. REPORTS ON THE PRESENT AND PROBABLE

IMPACT of Wash-And-Wear On Cotton Agriculture[1]

By **CARROLL L. HOFFPAUIR and BOLESLAUS M. KOPACZ**
Southern Regional Research Laboratory,[2] New Orleans, La.

THE last 20 years have shown vigorous advancements in technological fields of endeavor. This has been true in all phases of agriculture and particularly true in the field of cotton technology. In varying degrees, cotton can be made mildew resistant, water repellent or water soluble, flame and heat resistant, dimensionally stable, and of greatest import today, crease resistant. Crease resistance has been added to cotton's other desirable properties to effectively meet modern trends for more comfortable living.

The rapid acceptance of the minimum care or wash-wear concept is proof that its impact is tremendous. Although this development by no means shuts the door in the face of conventional fabrics, it opens another door—the door to increased sales for everyone involved in the household and apparel textile field from fiber to finished products. These increased markets for cotton are reflected in more business for the textile industry and to increased opportunities for cotton farmers to market their production profitably.

The term wash-wear has become such an accepted part of our way of life that it is difficult to realize how recently these products have appeared on the market. But the research leading to this development has been long accumulating. It was found as early as 1919 that cotton could be made somewhat wrinkle resistant by reacting it with acidified formaldehyde and that treatment with phenol-formaldehyde resins gave cotton wrinkle-shedding properties. These early developments, however, directed primarily at improving cotton's dimensional stability, were commercially unsuccessful because of undesirable collateral properties such as odor, discoloration and loss of fabric strength. Subsequently, new catalysts and modified resins were developed that led to a much improved cotton product.

However, wash-wear, as such, was pioneered by the synthetic manufacturers and from their first announcement in the early 1950's drew considerable consumer interest. Most noncellulosics are hydrophobic and do not absorb water. Therefore, when washed and hung up wet without squeezing wrinkles into them, garments made from these fibers will be fairly smooth after drying. As a consequence, dresses and uniforms made from these fibers became popular, particularly in the pucker and seersucker fabrics. The cotton industry, quick to realize the potential magnitude of the new market, immediately began intensive research efforts to produce an all-cotton wash-wear product. For this purpose, cotton was resin treated specifically for minimum care properties rather than dimensional stability.

The Value Of Research

The value of research in this field is emphasized by the estimate that 800,000 bales of cotton were used in 1958, that would not have been used but for the research development of wash-wear (1)[3]. This represents about 10% of total domestic cotton consumption. Continuing research on wash-wear is therefore recognized by cotton textile leaders to be an essential factor in maintaining and expanding cotton markets. Such recognition by the textile industry of the usefulness of the scientific approach to the solution of problems also opens the mill door to more complex chemical finishing processes developed through research to enhance cotton properties.

Contributions accumulated over the years from many textile and allied organizations have been incorporated into present wash-wear products. Some of the early work at the Southern Regional Research Laboratory was concerned primarily with pretreatments (mercerization and decrystallization under various conditions, and the attachment of carboxymethyl, aminoethyl, hydroxyethyl and other groups) that might make cotton more suitable for treatment with wash-wear chemicals. In addition, crosslinking agents and phenomena have been the subject of much research. The crosslinking agents in the early investigations included cyanuric chloride, di-isocyanates, formaldehyde, glycerol dichlorohydrin and various glycol derivatives. Further in this connection, fundamental research is felt to have furnished the basis for proprietary chemical modifications of cotton which impart wet wrinkle resistance.

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[1] Presented at the Southern Agricultural Experiment Station Collaborators' Conference on Advances in Research on Wash-Wear Garments, at the Southern Regional Research Laboratory, New Orleans, La., April 13-15, 1959.

[2] One of the laboratories of the Southern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.

[3] Numbers in parenthesis are references at the end of this article.

In recent years, S.R.R.L. scientists, working in co-operation with numerous organizations, have stimulated research and commercial application by evaluating industrial processes and products, providing basic information, discovering new resins and developing new and improved processes and formulation. Fundamental studies on the reaction of resins are providing increased knowledge of the mechanism of resin treatment.

Conventional Drycleaning

Research in co-operation with industry and the National Cotton Council has demonstrated that excellent wash-wear garments, with durable creases, capable of being laundered and dried mechanically, can be produced conveniently and inexpensively. Finishing of the entire garment using conventional drycleaning equipment was evaluated under contract research with the National Institute of Drycleaners. The results of this work showed that it is feasible to treat whole garments on a commercial scale. At least two concerns have used this technique on a large experimental or small commercial scale.

Scientists have demonstrated that yard goods can be treated with resins, dried without curing, and later fabricated into trousers. Creases can then be pressed in the trousers where desired, and given durability to repeated laundering by a final curing operation. This development offers opportunities for cotton in the large and lucrative field of dress trousers. The importance of this market is emphasized by the statement of the director of the Trouser Institute of America that "the most important new fabric development for Fall 1959, will be the increased availability of automatic wash-wear fabrics in Fall weights" (2). Co-operative work with a major trouser manufacturer to explore the commercial potential of such processes is underway.

Miss Pat Carite demonstrates to Miss Malinda Berry, the 1959 Maid of Cotton, and Dr. G. E. Goheen, assistant director of S.U.R.D.D., wash-and-wear properties of cotton organdy dress. The cotton dress, with full gathered skirt, was resin treated as a garment at U.S.D.A.'s Southern laboratory.

Among other contributions, research results led to the development of a new formulation using polyethylene and to other improved commercial practices which minimize wet soiling.

Much valuable practical information instrumental in aiding the rapid expansion of wash-wear products and the entry of many new firms into this field has been published. The publications include descriptions of formulations and techniques that give high quality wash-wear products and thereby assist inexperienced firms to build consumer confidence in cotton wash-wear products.

Ever alert to modern demands, textile scientists at S.R.R.L. and other laboratories are continually evaluating new or untried resins and chemicals as wash-wear finishes. Some finishes designed for other purposes also produce minimum care properties in fabrics. Wash-wear properties formerly cataloged as incidental side-effects are now being exploited by adjusting the treatment in an attempt to produce primarily minimum-care fabrics with extra features. These multifunctional treatments, offering a combination of properties, are in the initial stages of development. They suggest the possibility of a single treatment for a modern all-purpose cotton fiber, resistant to chemical and bacteriological degradation, with added strength, resilience and hand.

Wash-wear, however, is looked upon as more than a mere resin treatment and has led to a re-evaluation of the entire problem. It must be kept in mind that fabrics are only the raw materials for the manufacture of garments and that ultimate consumer satisfaction is based on the performance of the garment, not on the fabric from which it is made. Improvement in chemicals and resins for treating fabric must be accompanied by the development of suitable fabric structure and the improved quality imparted to the fabric must be retained throughout the stages of garment manufacture. The net result of this trend is the realization that the design of a wash-wear product begins in the selection of the most suitable cotton fibers, continues through spinning, weaving, finishing, garment fabrication, reasonable promotion, and ends in consumer satisfaction.

Handicapped By Tradition

Mill economies and tradition have hampered the introduction of ideal wash-wear fabrics. For example, over the years the number of filling and warp yarns in broadcloths have been standardized over a limited range. The handicap of traditional fabrics, however, is gradually giving way to more ideal wash-wear fabric constructions. Wash-wear fabrics now being marketed show evidence of slight constructional modifications, particularly in the general class of broadcloths. Of particular interest is a current U.S.D.A. project under contract with the Fabric Research Laboratories, Dedham, Mass., to improve the tear strength of cotton fabrics. Commercially available cotton apparel fabrics are being studied before and after finishing to determine the causes of tear strength losses due to treatment. These studies are expected to indicate modifications in yarn and fabric structures to improve tear strength and should be helpful in the development of better wash-wear cotton fabrics.

Although much progress has been made by many research organizations, obvious problem areas still remain to be solved. Among these, the following are of major importance.

(1) Selection of cotton with the most suitable fiber properties.

(2) Development of improved fabric constructions particularly suited to wash-wear, including optimum yarn and fabric structure.

(3) Development of more efficient and durable finishing agents.

(4) Selection of the best available combination of resin finishing agent, catalyst and textile auxiliaries, considering the end-use of the fabric.

(5) Enforcement of improved finishing techniques, stressing adequate cure and thorough afterwashing.

(6) Proper garment design with meticulous attention to the details of cutting, fitting and particularly sewing of wash-wear garments.

(7) Establishment of standards that clearly describe the wash-wear qualities of the garment.

(8) Maintenance of good practices for fabric preparation for finishes, such as scouring, desizing, bleaching and so forth.

(9) Adequate, permanent labeling, giving the classification and precautions necessary for laundering and care of the garment (3).

George Drake, S.R.R.L. chemist, shows Miss Berry that cotton treated for flame resistance will not sustain a flame without a constant source of ignition. Remove the match and the APO-THPC treated cotton stops burning. Cotton treated with APO alone has wrinkle-resistance properties.

Many Advantages

Despite the many problems, wash-wear garments made of cotton enjoy a number of advantages. The most important of these is superior comfort due to moisture absorption, heat transmission, and the traditional consumer preference for cotton products. As with any other new development, cotton wash-wear has come through a period of transition involving the elimination of many defects of the early treatments. Not the least of the handicaps that must be overcome is consumer resistance caused by exorbitant claims of promoters of inferior products. At its current stage of commercial development the fastidious person who demands a truly neat finish will not be content with a cotton wash-wear garment that has not been touched up with an iron. A late N.C.C. survey revealed that consumers and industry understand that for best appearance some touch-up ironing is necessary. This is true for wash-wears made from synthetics, blends or 100% cotton fabrics (4). However, the satisfaction that a garment gives is essentially a subjective matter. The necessity for uniform standards for wash-wear products is widely recognized and efforts are directed toward the development of such standards. Many consumers complain that some merchandisers have made exaggerated claims. This is due to the great divergence in standards for the same type of products under different labels. There is a real need not only for telling the truth but for knowing what the real truth is. At a meeting of the American Association of Textile Chemists & Colorists, member discussion showed much variance of opinion on this subject. Various groups offered their own versions of what they thought should be adopted as industry-wide standards. Each had merit, and eventually after an intense study of the problems a tentative set of recommendations was agreed upon (5).

Any development that has progressed as fast and as far as wash-wear must be accompanied by varying opinions. Wash-wear is no exception and the literature is full of diverse opinions as to what its ultimate market potential will be. Some think that it is purely a sales "gimmick" and will drop to a position of little importance in the market. Others contend that it will remain a major factor that we will have with us until a better development comes along.

Opportunity Of An Economic Lifetime

Typical of the first is an early estimate that the market will settle down with drip-dry dress shirts amounting to about 10% of the total dress shirt market (6). On the other side of the picture is the report in *American Fabrics,* Spring 1958 issue, which states of wash-wear: "call it one of the greatest opportunities of an economic lifetime and you will not be far wrong." This opinion is supported by many sources. Census Bureau reports show that 1.1 billion yards of cotton fabrics were treated with resins for crease resistance in 1957. Industry leaders recently estimated that such treatments exceeded 2.0 billion yards in 1958 and anticipate that 4 billion yards may be so treated in 1959. This would represent approximately two-thirds of the total U. S. cotton fabric production finished for apparel uses. Recently an industry spokesman said that within ten years practically every garment would be wash-wear to a degree and that the term wash-wear was taking on the same importance that Sanforized did many years ago when it became a household word (7). Such enthusiasm by responphenomena have been the subject of much research. The crosslinking agents in the early investigations included cyanuric chloride, di-isocyanates, formaldehyde, glycerol dichlorohydrin and various glycol derivatives. Further in this connection, fundamental research is felt to have furnished the basis for proprietary chemical modifications of cotton which impart wet wrinkle resistance.

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Wash-wear, however, is looked upon as more than a mere resin treatment and has led to a re-evaluation of the entire problem. It must be kept in mind that fabrics are only the raw materials for the manufacture of garments and that ultimate consumer satisfaction is based on the performance of the garment, not on the fabric from which it is made. Improvement in chemicals and resins for treating fabric must be accompanied by the development of suitable fabric structure and the improved quality imparted to the fabric must be retained throughout the stages of garment manufacture. The net result of this trend is the realization that the design of a wash-wear product begins in the selection of the most suitable cotton fibers, continues through spinning, weaving, finishing, garment fabrication, reasonable promotion, and ends in consumer satisfaction.

Handicapped By Tradition

Mill economies and tradition have hampered the introduction of ideal wash-wear fabrics. For example, over the years the number of filling and warp yarns in broadcloths have been standardized over a limited range. The handicap of traditional fabrics, however, is gradually giving way to more ideal wash-wear fabric constructions. Wash-wear fabrics now being marketed show evidence of slight constructional modifications, particularly in the general class of broadcloths. Of particular interest is a current U.S.D.A. project under contract with the Fabric Research Laboratories, Dedham, Mass., to improve the tear strength of cotton fabrics. Commercially available cotton apparel fabrics are being studied before and after finishing to determine the causes of tear strength losses due to treatment. These studies are expected to indicate modifications in yarn and fabric structures to improve tear strength and should be helpful in the development of better wash-wear cotton fabrics.

Although much progress has been made by many research organizations, obvious problem areas still remain to be solved. Among these, the following are of major importance.

(1) Selection of cotton with the most suitable fiber properties.

(2) Development of improved fabric constructions particularly suited to wash-wear, including optimum yarn and fabric structure.

(3) Development of more efficient and durable finishing agents.

(4) Selection of the best available combination of resin finishing agent, catalyst and textile auxiliaries, considering the end-use of the fabric.

(5) Enforcement of improved finishing techniques, stressing adequate cure and thorough afterwashing.

(6) Proper garment design with meticulous attention to the details of cutting, fitting and particularly sewing of wash-wear garments.

(7) Establishment of standards that clearly describe the wash-wear qualities of the garment.

(8) Maintenance of good practices for fabric preparation for finishes, such as scouring, desizing, bleaching and so forth.

(9) Adequate, permanent labeling, giving the classification and precautions necessary for laundering and care of the garment (3).

George Drake, S.R.R.L. chemist, shows Miss Berry that cotton treated for flame resistance will not sustain a flame without a constant source of ignition. Remove the match and the APO-THPC treated cotton stops burning. Cotton treated with APO alone has wrinkle-resistance properties.

Many Advantages

Despite the many problems, wash-wear garments made of cotton enjoy a number of advantages. The most important of these is superior comfort due to moisture absorption, heat transmission, and the traditional consumer preference for cotton products. As with any other new development, cotton wash-wear has come through a period of transition involving the elimination of many defects of the early treatments. Not the least of the handicaps that must be overcome is consumer resistance caused by exorbitant claims of promoters of inferior products. At its current stage of commercial development the fastidious person who demands a truly neat finish will not be content with a cotton wash-wear garment that has not been touched up with an iron. A late N.C.C. survey revealed that consumers and industry understand that for best appearance some touch-up ironing is necessary. This is true for wash-wears made from synthetics, blends or 100% cotton fabrics (4). However, the satisfaction that a garment gives is essentially a subjective matter. The necessity for uniform standards for wash-wear products is widely recognized and efforts are directed toward the development of such standards. Many consumers complain that some merchandisers have made exaggerated claims. This is due to the great divergence in standards for the same type of products under different labels. There is a real need not only for telling the truth but for knowing what the real truth is. At a meeting of the American Association of Textile Chemists & Colorists, member discussion showed much variance of opinion on this subject. Various groups offered their own versions of what they thought should be adopted as industry-wide standards. Each had merit, and eventually after an intense study of the problems a tentative set of recommendations was agreed upon (5).

Any development that has progressed as fast and as far as wash-wear must be accompanied by varying opinions. Wash-wear is no exception and the literature is full of diverse opinions as to what its ultimate market potential will be. Some think that it is purely a sales "gimmick" and will drop to a position of little importance in the market. Others contend that it will remain a major factor that we will have with us until a better development comes along.

Opportunity Of An Economic Lifetime

Typical of the first is an early estimate that the market will settle down with drip-dry dress shirts amounting to about 10% of the total dress shirt market (6). On the other side of the picture is the report in *American Fabrics,* Spring 1958 issue, which states of wash-wear: "call it one of the greatest opportunities of an economic lifetime and you will not be far wrong." This opinion is supported by many sources. Census Bureau reports show that 1.1 billion yards of cotton fabrics were treated with resins for crease resistance in 1957. Industry leaders recently estimated that such treatments exceeded 2.0 billion yards in 1958 and anticipate that 4 billion yards may be so treated in 1959. This would represent approximately two-thirds of the total U. S. cotton fabric production finished for apparel uses. Recently an industry spokesman said that within ten years practically every garment would be wash-wear to a degree and that the term wash-wear was taking on the same importance that Sanforized did many years ago when it became a household word (7). Such enthusiasm by respon-

Miss Berry is pleased with the appearance and feel of a sport-shirt treated as a garment for wash-wear properties. The shirt was treated by the National Institute of Drycleaners using regular dry-cleaning equipment.

sible textile leaders may not be overly optimistic in view of the fact that within the span of a few years this development in textiles has entered practically every home.

Over the last six years cotton's share of the industrial market has declined 11%. Fortunately, corresponding gains of approximately 13% have been realized in apparel uses. Steady gains in apparel uses can only be maintained by supplying the public something more than the ordinary cotton goods of past times, that is, goods having advantages of styling, built-in characteristics of minimum-care, and other desirable properties (8).

In 1958, the textile industry turned out some 9 billion yards of cotton yard goods. This total, however, represents a drop of about 7% from 1957 and of 13% from 1956. Up to Midsummer of last year, most textile firms were floundering in a recession of over two years duration. For most of the processing firms, however, business began to pick up sharply last July. This is considered by many as the beginning of an upturn that heralds cotton's comeback. Harry S. Baker, National Cotton Council's former president, expects total foreign and domestic consumption of U. S. cotton to hold close to an average of 13 million bales during 1959 (9). Foreign interests hope the U. S. upturn will be of sufficient force to be reflected in their countries as well (10).

Textile leaders enthusiastically point to wash-wear developments as the spearhead that will further entrench cotton as the king of fibers (11). Wash-wear is not the only factor contributing to cotton's strength but it is a principal contributor. The new wash-wear fabrics serving a fringe market today are expected in a few years to dominate the business (12).

Summary

To summarize briefly, the future of cotton looks bright. Although it has lost ground in industrial markets and, in common with all textile materials has suffered from the recent recession, it is staging a remarkable comeback in apparel and household goods. Much of the current strong market potential is due to the development of cotton wash-wear products of improved quality.

Through research and development, better all-cotton wash-wear garments can be developed. These garments will retain the natural comforts of cotton and should have the ability to withstand rough laundering as only cotton can. The intelligent ability of the cotton textile industry to accept the challenge of wash-wear problems and cope with them is reflected in an upsurge in sales of all-cotton minimum-care garments. However, to maintain all-cotton easy-care gains and to establish leadership in this new market, research and industry must continue to try to perfect cotton minimum-care properties. Many of the research steps leading toward this goal have been accomplished. Others are on the way. Utilization research will continue to benefit directly all segments of cotton agriculture—farmers, processors, manufacturers and merchants—for it is the key to new and expanded markets.

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National Safety Congress Set For Oct. 19-23

Off-the-job safety as it affects industry will play a prominent role at textile sessions of the 47th National Safety Congress, annual convention of the National Safety Council, October 19-23. The congress, which will be held in Chicago, will attract an expected 12,500 safety specialists from the U. S., Canada and several foreign countries.

Delegates to congress textile sessions will hear these featured talks: "Off-The-Job Safety Pays For Industry," John M. McAlpine, Celanese Corp. of America, Rock Hill, S. C.; and "Gimmicks To Promote Off-The-Job Safety," O. H. Bynum, The Du Pont Co., Camden, S. C. Textile sessions of the congress will be held October 20-21 at the Conrad Hilton Hotel.

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What Do You Know About Patents?

By J. E. CARNES

COMPETITION in any field of endeavor usually causes an increase in the number of patents obtained in that field. As long as anyone can remember, there has been competition in the textile industry and there have been patents but in recent years the value of patents has come to be more readily recognized by those in this art. In many cases a patent provides the manufacturer with a competitive advantage over others in the field because he can prevent others from practicing the invention or he can collect royalties from them under a licensing arrangement. There is hardly any segment of the textile industry that is not directly or indirectly affected by patents and this article is written in an attempt to explain some of the mystery which sometimes seems to surround patents.

There are many pitfalls along the path which leads from the conception of an invention in the inventor's mind to his ownership of a patent. There are also many misconceptions about what patents are and how they are obtained. Before discussing specific patents and their value in the textile industry, it is proper to give to engineers, research workers and inventors a clearer idea of what patentable inventions are and how to protect them and also explain briefly the relations of employer and employee in patent matters.

What Are Patents?

Patents are granted to inventors by the Government to promote the arts and are authorized by the Constitution and the Federal Statutes. Article I, Section 8 of the Constitution reads as follows:

> "The Congress shall have power * * * to promote the progress of science and useful arts, by securing for limited time to authors and inventors the exclusive right to their respective writings and discoveries."

A patent does *not* give the patent owner a right to manufacture, use and sell his patented product but *does* give him the right to *exclude* others from manufacturing, using and selling his patented product for a period of 17 years. There are *pioneer* patents which cover a broad field and *improvement* patents which cover a narrower field and, it is not uncommon for an inventor to own a patent and yet be unable to legally manufacture, use and sell his patented product because of the existence of a broad unexpired patent. Patents are *not* renewable, but patents for improvement inventions may be obtained.

The Courts have recognized the difficulty of defining an "inventor" as set forth in the Constitution and there are many decisions relating to this subject.

Although a concise definition of invention has not been found it has been said that, "invention is a new display of ingenuity beyond the exercise of ordinary mechanical skill." No one can say with certainty precisely what constitutes invention in every instance and when there is reasonable doubt, a patent application should be filed to let the Patent Office decide. The Courts may overrule the decision of the Patent Office if the patent is later litigated and declare the patent invalid.

What Is Patentable?

Section 101 of the Patent Codification Act states:

> "Whoever invents or discovers any new and useful process, machine manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

If an invention does not fall within one of the statutory classes set forth above, it is not patentable. Examples of subject matter which is not within the statutory classes are: the mere arrangement of printed matter, a method of doing business, a scientific principle divorced from any tangible structure and a substantially unaltered thing occurring in nature. Many people believe that "ideas" are patentable but this is not true. Only the *means* of carrying out the idea are patentable.

Section 102 states that, "A person shall be entitled to a patent *unless*—

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country before the invention thereof by the applicant for patent, or
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the U. S., or
>
> (c) he has abandoned the invention, or
>
> (d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than 12 months before the filing of the application in the U. S., or
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the U. S. before the invention thereof by the applicant for patent, or
>
> (f) he did not himself invent the subject matter sought to be patented, or
>
> (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and

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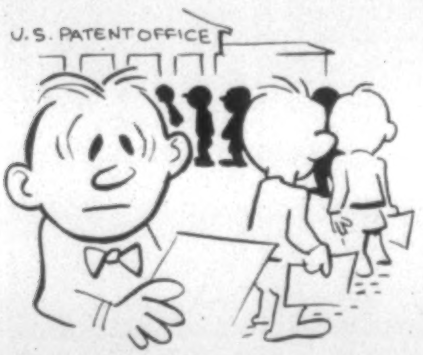


How long does it take to get a patent?

> reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."

If any one of the above-listed conditions exists, a valid patent *cannot* issue on the invention; therefore, you should check each of these conditions before you even consider filing a patent application.

How To Obtain A Patent

While anyone may apply for a patent, it is advisable to employ a patent attorney or agent to prepare the patent application for you because, in many cases, the value of the patent depends upon the skill of the person preparing the application.

Most patent attorneys and agents will recommend that a "State of the Art" search be made before filing an application. The search will determine if the idea is *novel* and also help in defining your invention over the prior patents. If the results of the search show that your invention is not new, then the cost of filing and prosecuting an application will not be wasted.

In some cases the patents found in the search will not disclose exactly the same structure for doing the same job as the structure being searched, but are sufficiently close so that one skilled in the art would be able to modify the structure disclosed in the prior patents by the application of mere mechanical skill as distinguished from inventive skill. In patent law, everybody is presumed to have knowledge of *all* prior patents whether they actually do or not, and therefore the invention must be a departure from the orthodox path of mechanical skill pointed out by the prior patents. In doubtful cases, it requires the judgment of experience to determine if an application should be filed.

A patentability search on a relatively simple device usually costs about $50 or less while a search on a complex machine having several features which are believed to be novel will run into several hundred dollars. The cost of the search will cover the cost of patent copies and a report discussing the patents found with a recommendation that the inventor either consider or not consider filing a patent application. When the search discloses prior inventions which are very close to the invention, the engineering or commercial importance of the invention will sometimes influence the decision and if the commercial aspects of the invention are of great importance, or if from an engineering standpoint the invention appears to be the best way of accomplishing the desired result, it may be desirable to file a patent application.

How Much It Costs

Where there appears to be a possibility of obtaining patent protection, many attorneys will include in the search report an estimate of the cost of preparation of the patent application. This cost will of course vary, depending upon the complexity of the invention and the time which will be required to prepare the application. In order to save money, if for no other reason, it is important that the inventor be able to present drawings or otherwise be able to explain all the details of his invention to the person who will prepare the patent application. The preparation of an application covering a relatively simple device usually runs from about $350 to $400, which includes the cost of drawings and a $30 Government filing fee, if there are 20 claims or less. The preparation cost of an application covering a complicated machine may run as high as several thousand dollars.

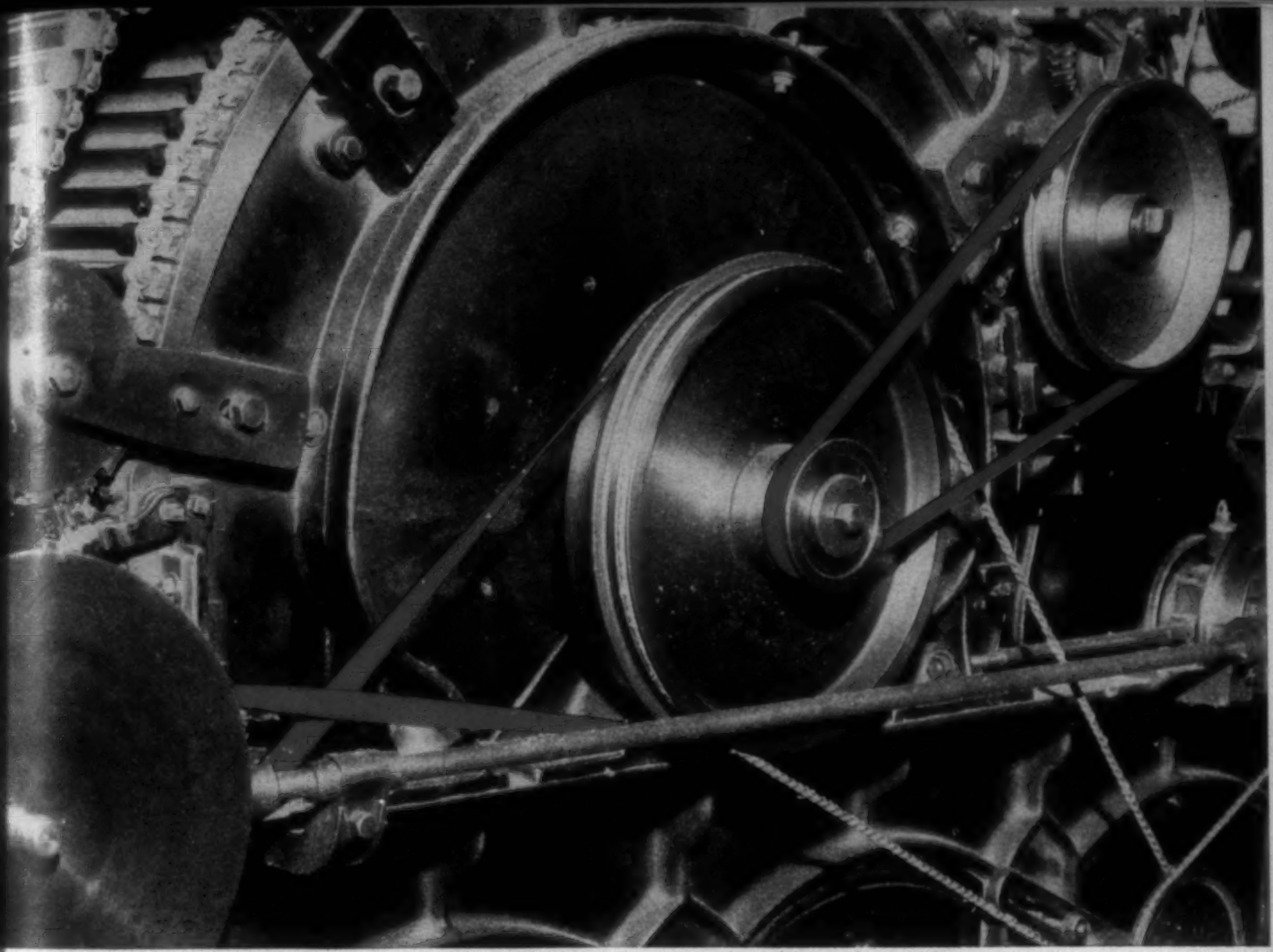
In order for an attorney or agent to do the best possible job in preparing the application he should know as much about the invention as the inventor himself. This should include all the advantages of the subject invention over prior devices as well as the details of construction. The inventor should be diligent in instructing his attorney to file an application and the attorney should proceed with preparation of the application with a reasonable degree of promptness, but undue haste often proves to be as unwise as a lack of diligence.

File With Care

The effort to get an application on file as quickly as possible without due regard to a well-prepared application should be discouraged because once an application is on file no new matter may be added which is not a part of the original application as filed. A mistake in the disclosure may result in the loss of the patent to the first one to conceive the idea, and if it does not result in a total loss of a patent, a hastily prepared application may mature into a weak patent giving little protection.

The patent application should clearly and concisely disclose the invention in the best mode contemplated by the inventor of carrying out his invention and must include drawings whenever the nature of the subject requires it. The Patent Office rules regarding preparation of the patent drawings are enforced rigidly and any departure from them will cause delay in the examination of the application. After the application is completed it is sent to the inventor for his approval and signature before it is mailed to the Patent Office.

When applications are received in the Patent Office they are assigned to one of the 70 examining divisions and a filing receipt will be mailed to the applicant's attorney. The examiners within each division are assigned patent applications which relate to a subdivision of the art with which they are especially well acquainted. They first examine an application to see if it complies with the law and rules of practice and then search the patents and applications in the patent classes to which the invention pertains to determine if the invention is novel. The examiner then prepares a "Patent Office Action" in which he cites the closest "reference" (prior patents or publications) and in most cases rejects some or all of the claims for want of novelty over the references. The pertinence of the reference, if not obvious, must be clearly explained and the anticipated claims specified. The first action is usually received from



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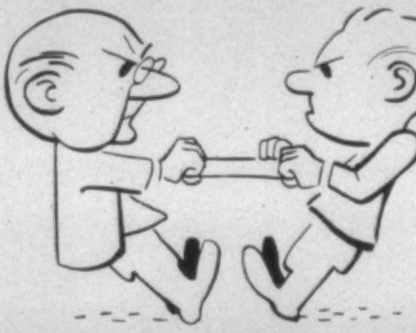

Who owns a patent—employer or employee?

six months to one year after the filing date, depending upon the backlog of work in the division to which it is assigned.

An "amendment" in response to the examiner's action must be made within six months after the date of the action or the application will be held abandoned. The amendment may include a request for reconsideration of the rejection of the claims and/or amendment of the claim language so they can distinguish over the references. Care should be taken in amending the claims because if the claims are too broad, they are invalid and if they are too narrow, infringement may be easily avoided. In very rare cases the examiner is unable to find any references which anticipate any of the claims and in the first action the examiner will issue a "Notice of Allowance."

Usually the third Patent Office action is made "Final" and if the applicant still believes the invention is patentable he may appeal to the Board of Appeals. However, in most cases the examiner and the attorney are able to agree on the patentable merits of the invention before a final rejection. Once the application has been allowed a final Government fee of $30 plus one dollar for each claim over 20 must be paid before the patent will issue, and copies are printed. The length of time required to obtain a patent varies with each application, but most patents are obtained within two to three years after they are filed.

Two Applicants, One Idea

In rare cases, two or more parties will apply for patents and claim substantially the same invention. The Patent Office will then institute what is known as an "interference" proceeding to determine which party is the first inventor. An interference is one of the most technical of all legal procedures and each contesting party is given full opportunity to present his case, including the taking of testimony and the hearing of evidence given in behalf of his opponent with full right to cross-examine the opposing witnesses. Priority must be established by *provable* acts and each inventor may carry back the date of the invention by clear and convincing evidence to an earlier date, provided the earlier date is not so far back as to make the party guilty of unreasonable delay in filing his application. In an interference it is possible for a party who is last to file an application to be awarded priority of invention over a party who filed an application before him. Of course, if an application is involved in an interference proceeding, this will delay the granting of a patent as much as a year or more.

Employee-Employer Relationships

A patent may be treated like any other property and is entitled to the same protection. The patentee or his assigns are free to make any lawful disposition of the property and may sell shares in the grant; may grant licenses to others to make, use or sell the invention of the patent; may dedicate the patent to the public; or may simply hold the patent without using or attempting to use it.

Whether the invention belongs to the employee or his employer will depend upon the facts in each case and when a dispute arises the patent attorney should be consulted. However, there are some general rules that may be helpful to an understanding of this relationship as it relates to patents. Many companies require employees to sign employment contracts in which they agree to assign their inventions to the company and if the contract is reasonable, there is no question concerning ownership.

In the absence of an expressed contract to the contrary, the following general rules apply. Ownership of inventions made by an employee outside of working hours, without the use of materials belonging to the employer, and having no bearing upon the employee's duties, vests in the employee, with no interest whatsoever in the employer. Ownership of inventions made by an employee who is employed specifically to make the invention, vests in the employer with no interest whatsoever in the employee. Ownership of inventions made by an employee arising out of or made in connection with the employee's duties, which duties are not specifically that of inventing or developing inventions, and where the employer's materials are used to perfect the invention, vests in the employee with an implied license or "shop right" to the employer. The shop right which the employer receives does not affect the ownership of the invention and merely gives him the right to use the invention in *his* business without paying royalties to the employee.

Design Patents

So far we have been talking about "mechanical or structural" patents. What about design patents?

Design patents may be distinguished from mechanical patents by the fact that design patents are directed to the artistic or ornamental appearance of the article while mechanical patents are directed to mechanical functions, processes or compositions of matter. Most designs are short-lived and may soon lose their sales appeal so the Patent Office has recently increased the number of examiners in this section so that the patent will issue in time to prevent others from copying the article. It is not unusual for a design patent to issue within a year after the application is filed. The application must contain a drawing clearly showing the ornamental appearance of the article and its appearance must be "original" to be patentable. Design

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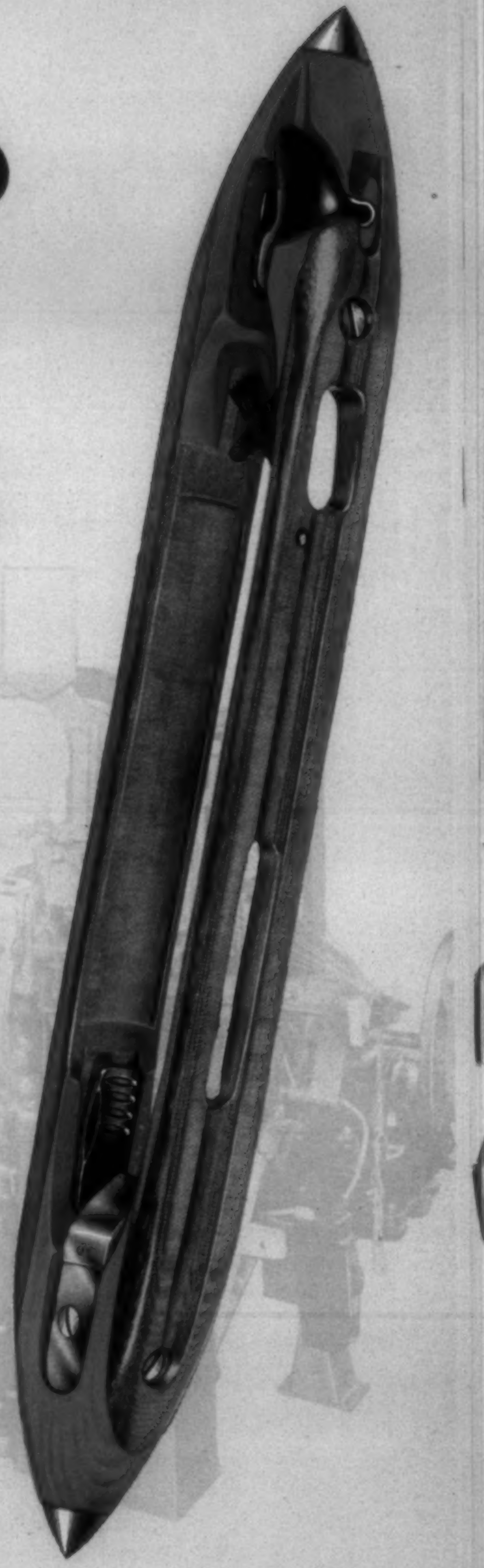

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applications are examined by the Patent Office in the same manner as other applications. When the application is allowed, the applicant may elect to have the patent granted for a term of 3½, 7 or 14 years, according to the Government fee paid, i.e., $10, $15 or $30, respectively.

Infringement

The right conferred by the patent grant extends throughout the U. S. and its territories. You will see many articles sold with the terms "Patent Applied For" or "Patent Pending" marked thereon. These terms have no legal effect, but only give information that an application for patent has been filed in the Patent Office. The protection afforded by a patent does not start until the actual grant of the patent and infringement consists in the unauthorized making, using or selling of the *patented* invention during the term of the patent.

When a patent is infringed, the patentee may sue for relief in the Federal court. In the suit, he may ask the court for an injunction to prevent the continuation of the infringement and he may also ask the court for an award of damages because of the infringement. Infringement is determined primarily by the language of the claims of the patent and if what the defendant is making does not fall within the language of any of the claims of the patent, he does not infringe.

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(Continued on Page 82)

The Continuous Flow Cleaning Line

a means of lowering cost and improving quality

By **LOUIS PLATT**
Design Engineer
Saco-Lowell Shops

OVER the past years concern has been growing regarding the adequate cleaning and blooming of cotton in the opening room. During this time there has been a gradual deterioration in the standard of lap cleanliness and in some cases a marked increase in the curling or stringing of the processed stock. Various reasons have been put forward for this decline, such as the mechanical picking of cotton, heating and pre-cleaning at the gin resulting in an increase of pepper trash, as well as the old standby of lowering the grade standards.

However, in the National Cotton Council's publication *Cotton Processing Waste,* August 1958, a graph of the "Trash Analysis of Bales Used in Grade Standards 1936-1956," shows that there has been little change in the actual trash percentage in the various grades. Allied with this is a downward trend for less total waste extracted during processing through the mill. This in itself shows that the machinery makers have been aware of this problem and during the last few years have increased the selective efficiency of their opening and cleaning machinery. However, it is apparent that the present standard of cleaning efficiency is still too low, and regardless of the above facts, there is definitely a deterioration in the cleanliness and opening of the lap cotton, and somewhere along the line there must be a reason for this.

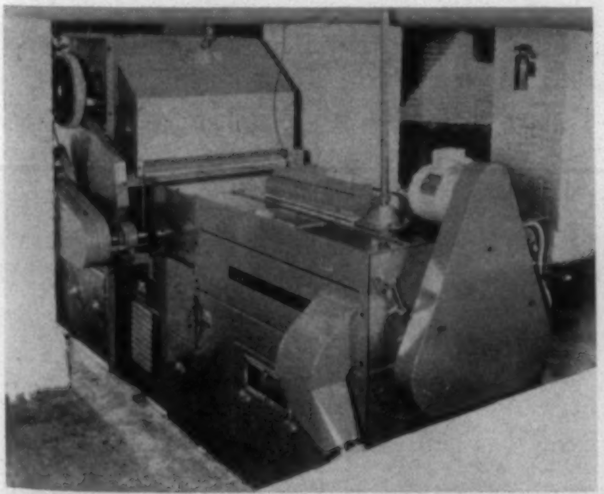


Fig. 1—The F7 feeder, the No. 15 opener cleaner, and the No. 17 opener cleaner have the exterior appearance of being one machine when they are coupled together.

As we all know, the state of the textile industry during the last years has become more competitive, both from internal and external sources. This has resulted in the advent of short-cut processing, higher production, and the lowering of the cotton mix, the latter point showing the way to the greatest saving in processing cost.

If we now look at the relationship of the opening and picking to the rest of the mill, it is more than likely we will find that the difference is as great as that between the Model "A" Ford and one of the 1959 automobiles. This process is sometimes reckoned as a necessary evil, and sometimes not even necessary, as happened at one mill which, when completed, was found to have no provision made for opening and picking machinery. This, of course, is a somewhat extreme example. However, let us consider a mill that was originally laid out for say 50,000 spindles. The opening and picking machines at the time were perfectly adequate for the job it had to do, at a probable production of 250 to 320 pounds per hour per picker. Over a period of years modernization in the card room and spinning brought about increased efficiency and higher production; yet the opening and picking, with very little alteration, is now being asked to do just as good a job at 350 to 450 pounds per hour per picker. But, as the production increased, efficiency in trash removal dropped, and complaints of dirty laps were made by the card room. The mill's answer to this was to put additional cleaning machines in the line to remove more trash, which was a generally accepted procedure. The result of this, in cases where mills employed too many machines, was overbeating, which caused degradation of the cotton staple, increase in neps and curling of the cotton, all throwing additional work on the cards.

Of course, during this period high production machines which were made efficient in trash removal were designed

What's behind the deterioration in the standard of lap cleanliness and increased curling of cotton? If the demands of high production placed on cleaning machinery are responsible, will additional machines fully remedy the situation? The author says no, and points out the greatest saving in processing costs is realized by dropping the grade of the mix and still coming up with a finished product of equal quality.

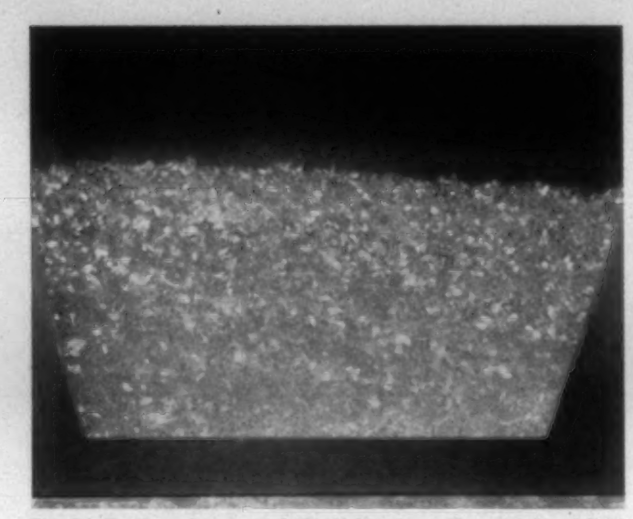


Fig. 2—Trash under the right-hand beater consists mainly of light pepper trash and fly. It is very similar in characteristic to trash taken from return air filters.

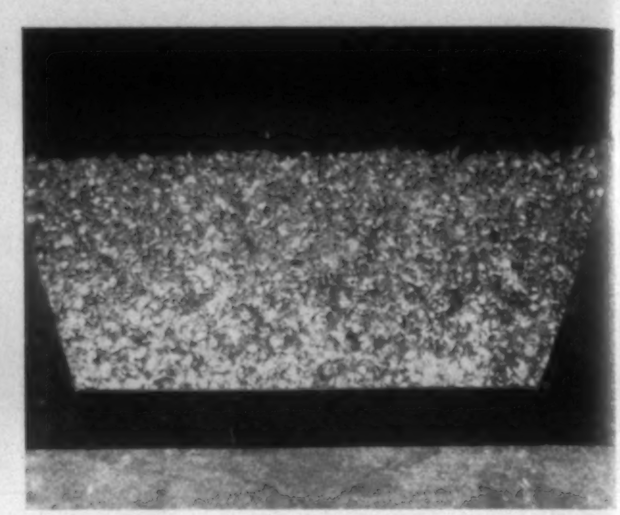


Fig. 3—An air flow is induced under the left-hand beater to assure that only motes and flakes and the larger trash particles can fall through the grids.

and put on the market; but this was not the complete answer to the problem.

One of the most misunderstood machines has been the vertical opener, which properly used has been hailed as the finest cleaning machine evolved. However, when mills increased the work load on this machine to keep up with high production elsewhere in the plant, differences in the processed stock were apparent. If the draft through the machine was not increased, allowing the cotton to dwell, they found that they had created a condition which created neps and curled cotton not experienced in normal operation; while too great an increase in the draft reduced its effectiveness as a cleaner.

Misuse of the vertical opener directed our attention to some of the fundamental principles involved in all present-day high production opening and cleaning machinery, and directed us toward a course of inquiry that would help our developments in the future.

As remarked before, the greatest saving in processing costs is the ability to drop the grade of the mix and still come up with an equal in finished product. Surely the best place to attain this is in the area of lowest capital cost per pound per hour of finished product—the opening and picking room.

It is for these reasons that we have approached the concept of an opening and cleaning line using a low production, high efficiency, flow line method; and it is our belief that this method will process cotton with a higher cleaning efficiency, lower beater action and staple degradation; thus resulting in a cleaner, more even lap from the picker than has hitherto been possible. As yet, we are only part way along this line in what we can actually put on the market, namely the No. 15 opener cleaners, but in our minds the way is clear, and we are now working toward the time when we can offer the new, complete opening and picking line. It is the first part of this line, probably the most important part, that we wish to discuss.

The only machine of this line in production is the No. 15 opener cleaner, of which there are hundreds in mills all over the world. This machine did such a good job that, recognizing the capabilities of cleaning and opening the cotton at low production, we designed another machine to follow in sequence; namely, the No. 17 opener cleaner, which still is only in limited production. This machine has been tested under mill conditions and all tests have surpassed our expectations.

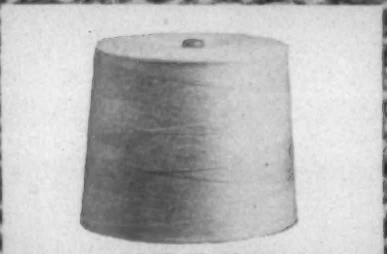
The machines under test have comprised the F7 feeder, No. 15 opener cleaner, and No. 17 opener cleaner. These three machines were coupled together and their exterior appearance is that of one machine (Fig. 1). The No. 15 is a Buckley beater and the No. 17 is a double pinned beater machine with exterior adjustable grid bar setting, and each beater trash compartment separate and fulfilling a different function.

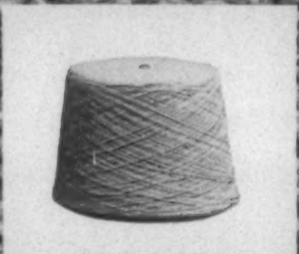
It has already been remarked that the percentage of trash in cottons has altered very little. What has altered is the general character of the trash, inasmuch as a greater percentage of the trash is now composed of leaf and grass and such trash, that has a buoyancy equal, or nearly equal, to that of the cotton fiber itself. This, then, is the type of trash that is difficult to remove, and in processing breaks up into pepper trash and shows itself in the finished

Table I

Test		Lint		Trash		Loss	
No.	Line Layout	Bale	Lap	Bale	Lap	Bale	Lap
1	Regular Line	95.88%	98.27%	1.94%	0.72%	2.18%	1.01%
3	F7-#15s-#17s-#12-2 Beater Pickers	96.76%	98.32%	1.94%	0.88%	2.18%	0.79%
1	F7-#15s-#17s-#16-2 Beater Pickers	95.88%	98.19%	2.39%	0.90%	1.86%	1.00%
2	Regular Line	95.75%	97.49%	2.39%	1.0 %	1.86%	1.50%
2	F7-#15s-#17s-#12-2 Beater Pickers	95.75%	98.50%	2.72%	0.89%	0.52%	0.61%
3	Regular Line	96.76%	98.53%	2.72%	0.61%	0.52%	0.86%

MODEL 77 CONE


MODEL 78 CONE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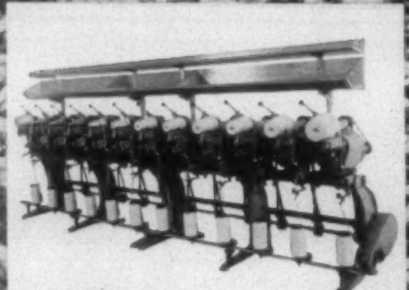
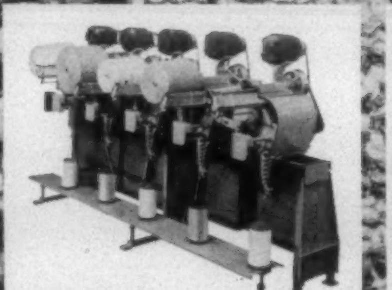
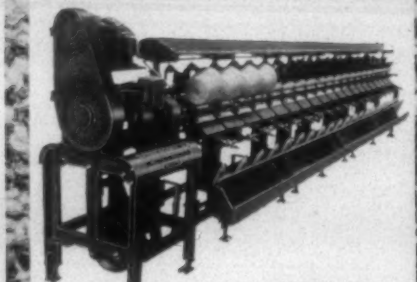

MODEL 77


MODEL 78


MODEL 35

Each of these machines is designed for a different situation. Each does a highly creditable job within its scope. Here are the details: —

MODEL 78 — This machine (built in 5 spindle units) produces 8" to 10" traverse, precise wind cones up to 16" in diameter and weighing up to 35 lbs. each. Ball bearing spindles are individually motor driven at speeds up to 800 R.P.M. It has controlled slow start and spindle brake, heavy duty belt gainer with hand wheel adjustment (or positive gear gainer, if desired), positive size stop, electric drop wire and expansion type cone holders, with handle control, for easy donning and doffing. Will wind overend from bobbins or from swifts, reels or unrolling devices.

MODEL 77 — Built in 6 spindle sections, produces 4" to 8" traverse, precise wind cones up to 10" in diameter and weighing up to 14 lbs. each. Ball bearing spindles, individually belt driven by one motor, run at speeds up to 1100 R.P.M. It has a positive, long wearing package brake and positive solid tapered pulley belt gainer. It will wind overend from bobbins, or from swifts, reels or unrolling devices. 90° build-up from face of cone prevents broken back or under-wound packages.

MODEL 35 — Built in units of 10 spindles to 80 spindles. Produces open wind 8" traverse cones up to 11" in diameter and weighing up to 9 lbs. each. Winding speeds from bobbins is from 180 to 250 Y.P.M. and from skeins 100 to 150 Y.P.M. Standard taper cone holders are 7° 22½' and 3° 51'. Package brakes and disc waxing attachments are extra. Can be equipped to wind from swifts, etc. as well as from bobbins.

Write for Model 78 bulletin A-98A, Model 77 bulletin A-99, or Model 35 bulletin B-46A.

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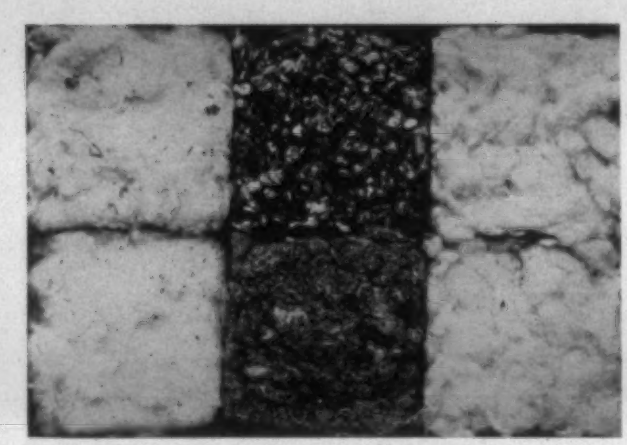

Fig. 4—Examples of waste taken from the left-hand and right-hand trash compartment in the No. 17 opener cleaner.

product. There is also a greater amount of small pieces of seed coating with long fibers attached, as well as immature seed with a great deal of fiber attached to them. This must be removed as soon as possible before any break-up makes the task of removal more difficult.

It has been found that the first step necessary in efficient cleaning of cotton is to open the stock into as small pieces as possible, and as gently as possible, without breaking up the trash particles. This can only be done in a free-feed type of opener, that is, a machine which does not hold the stock while it is being beaten.

Therefore, the first machine in the line is the blending feeder, the feed lattice of which is combed with a high-speed oscillating comb. This feeds small pieces of stock to the next machine, the No. 15 opener cleaner, which again is a free-feed machine fitted with a Buckley beater and having grid bars 216% of its circumference. Owing to the low production and small tufts fed, the cotton is gently agitated against the grids, all the cotton getting equal treatment and working, releasing motes and the larger trash particles and allowing them to fall through the grids. The stock is then free-fed directly into the No. 17 opener cleaner with its twin beaters, the pins of which are set spirally along their lengths, the beaters rotating in the same direction. On the up-beat side of the machine are a series of adjustable baffles which can be set from outside the machine. These can be positioned to either retard or accelerate the flow of stock, depending on whether more or less cleaning action is required.

The draft through this machine is very low, and the stock follows around the beater path and is not sucked through the machine without any processing. There is an induced air flow under the left-hand beater which assures that only motes and flakes and the larger trash particles can fall through the grids. Very little lint is found in these droppings. The trash compartment under the right-hand beater is sealed and separate from the left-hand side, and on this side the droppings consist mainly of the light pepper trash and fly. The difference can readily be seen in Figs. 2 and 3, which show the interior of the trash compartments, and in Fig. 4 which shows representative samples. As can be seen, the droppings on the right-hand side are very similar in characteristic to those found in filter waste. Again there is a very small lint loss of actual spinnable fiber.

Table II

Processing Stage	Regular Lint	Regular Trash	Modified Lint	Modified Trash
Cotton Mix	95.1%	3.75%	95.1%	3.75%
No. 15			96.2%	3.1 %
No. 17			96.6%	2.5 %
V.O.	95.8%	3.4 %	96.5%	2.4 %
1st No. 12	96.0%	3.2 %	96.9%	2.2 %
2nd No. 12	96.6%	2.7 %	97.0%	1.85%
Breaker	96.6%	2.4 %	97.3%	1.6 %
Lap	97.3%	2.05%	97.3%	1.3 %
Card Sliver	98.9%	0.42%	99.2%	0.26%

While there is very little difference as regards the principle of the No. 15 and the No. 17 opener cleaners with other type beater cleaners, it can be shown that the higher efficiency of these machines is in the theory of low production high selectivity, in which all the stock gets equal treatment and is not forced through by the following stock.

Fig. 5 shows the effect of increased production on these machines and proves that as production increases, cleaning efficiency of the machines drop. While the production is small it shows what must happen; and to a greater extent in high production machines when the production is increased from 900-1,500 pounds per hour.

The first mill trials on the prototype No. 17 opener cleaners showed that it was possible to eliminate at least two of the major cleaning machines in the line and still retain the same cleanliness of lap with a much better appearance of the stock. Table I shows the machinery set-up and trash content of bale stock and finished lap, with different mixes. The regular line consisted of F7 feeder—No. 15s—No. 16—No. 12—No. 12—and two beater pickers. This line was used as the control.

While these results were encouraging, it was thought that we could still improve the F7—No. 15—No. 17 set-up, and it was decided that further tests should be carried out at Chicopee Mfg. Corp., Chicopee Falls, Mass.

Table III

No. 1 Line	Lint	Trash	No. 2 Line	Lint	Trash
Cotton Mix	95.6%	2.9 %	Cotton Mix	95.6%	2.9 %
Type A	95.6%	2.8 %	No. 15	96.5%	2.25%
Type B	96.4%	2.2 %	No. 17	96.5%	1.6 %
Vertical	96.6%	2.0 %	Vertical	96.5%	1.6 %
1st No. 12	96.8%	1.8 %	1st No. 12	96.5%	1.55%
2nd No. 12	---- --	-- ----	2nd No. 12	96.6%	1.5 %
Breaker	97.2%	1.6 %	Breaker	97.3%	1.3 %
Lap	97.7%	1.4 %	Lap	97.9%	1.1 %
Card Sliver	98.5%	0.32%	Card Sliver	99.0%	0.23%

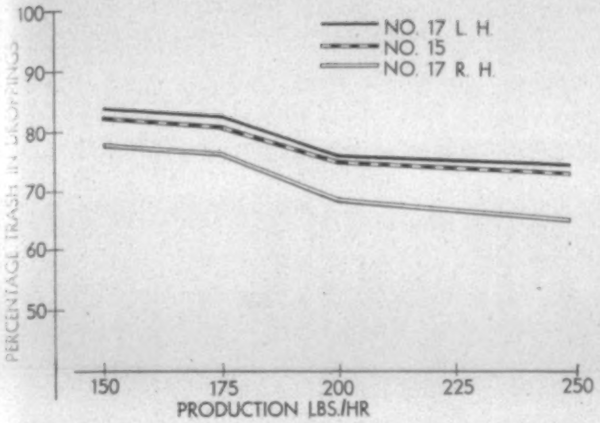

Fig. 5—When percentage trash in droppings is plotted against the number of pounds per hour produced by a cleaning machine it is seen that as production goes up, cleaning efficiency drops.

The two previous installations at this mill were: feeders—vertical—two No. 12s—and two beater pickers. One of the lines was altered by the inclusion of No. 15 and No. 17 openers. The first test we ran was to see the improvement in lap cleanliness on the modified line. This test was on a 20-bale mix of L.M. and S.L.M. cotton. Two 2,000-pound lots were prepared and each was run through the respective lines. Table II shows the percentage of trash in the stock in each successive stage. This test also showed that even with the additional processing, the nep count on the card web was no higher.

Shortly after this test was completed, the mill altered its regular line by adding pre-cleaners (Type A) to the feeders, and by the further addition of a contemporary high production opener cleaner (Type B), the complete line being: feeders—Type A machine—Type B machine—vertical—two No. 12s—and two beater pickers. Over a period of time, various comparative tests on the running mix were made on percentage of trash in the stock at various machines, also in the lap.

During the trial period we carried out extensive tests on the prototype No. 17 opener cleaner with various beater speeds, grid setting and the flow of the stock through the machine. Our findings showed that some alteration in design would improve the cleaning capacity of the machine. Therefore, the prototype machines were replaced with the new machines which incorporated the modifications we had found necessary. After a suitable running-in period we duplicated the previous large-scale test. These tests have shown a marked increase in the relative cleaning efficiency of the new No. 17 opener cleaner.

There is a difference in the machine sequence on the regular line, as previously remarked. This had been altered and was as follows: feeders—Type A machine—Type B machine—vertical—No. 12—No. 12—two beater pickers. However, after this line had been running for a period, it was found that curling was taking place due to excessive beating. The last No. 12 opener, being the easiest to bypass, was taken out of the sequence. This helped to a slight degree, but did not remove initial cause of curling.

This next test was similar in all respects to the previous test: A 20-bale mix of L.M. and S.L.M. cotton. Two 2,000-pound lots were prepared and each run through the respective lines. Table III and Fig. 6 show the percentage of trash in each successive stage.

The figures in Table III are purely a summary of the

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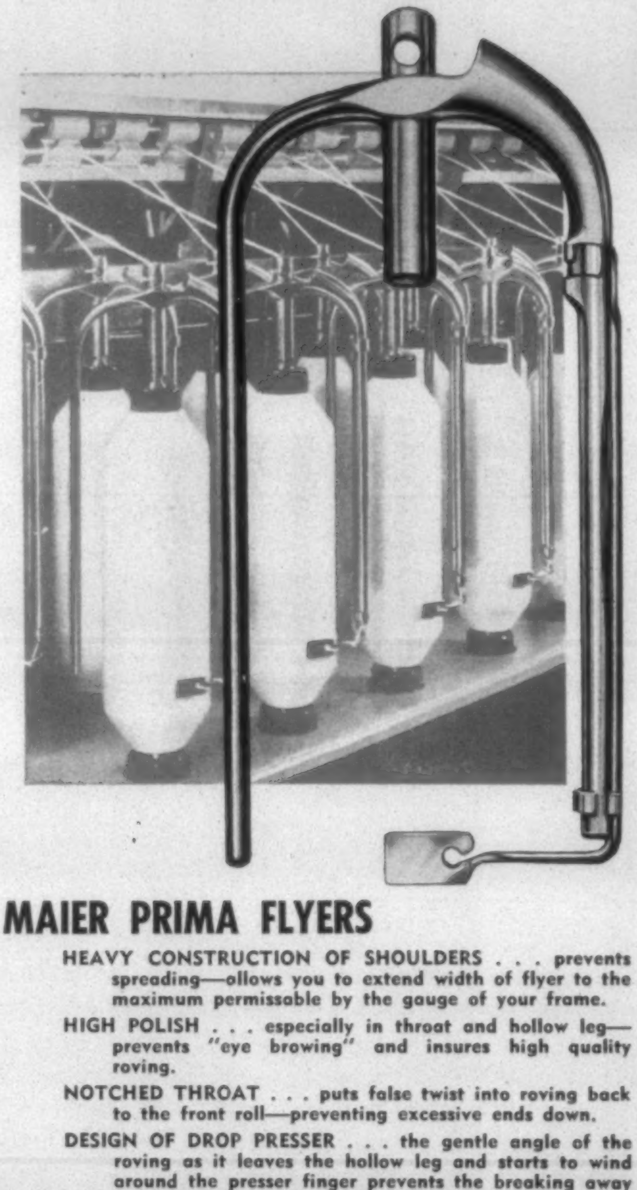

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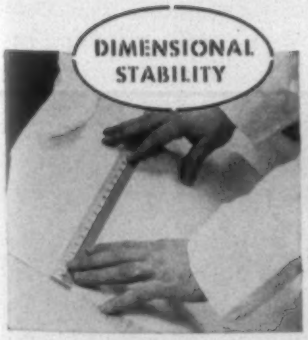

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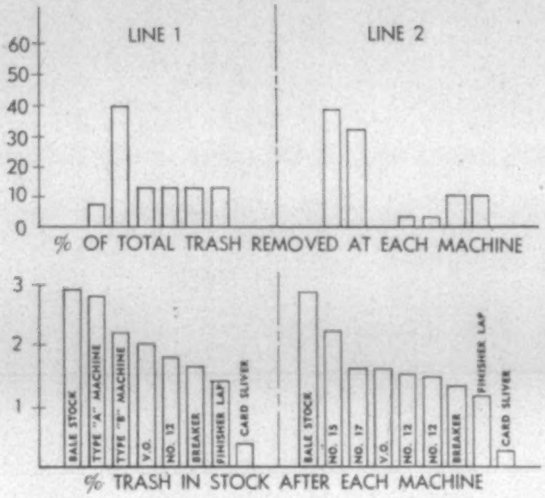


Fig. 6—The percentage of trash in stock at various stages of processing in the cleaning line.

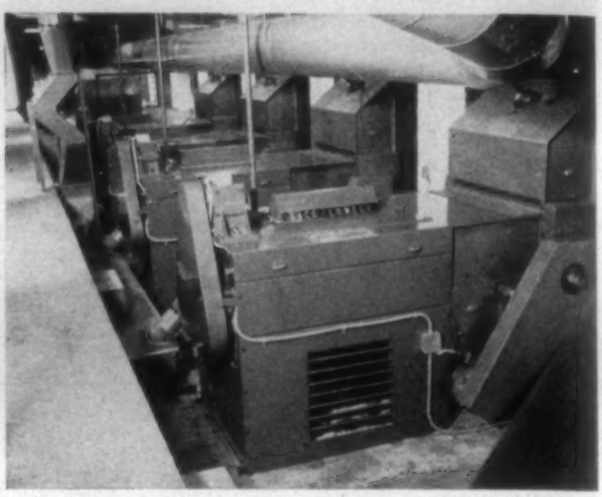


Fig. 7—A mill installation of the cleaning line.

test results and do not show the full advantages gained. For example, if we look at the trash content of the stock up to the vertical in both lines and compare it with the actual weight of droppings from each machine, also the accumulative total, we find as shown in Table IV that the machinery in Line No. 2 is more selective. A further analysis of the results show that even with the additional machinery in Line No. 2, the total waste percentage at 2.45% is not much higher than Line No. 1 which is 2.11%. However, there is an appreciable difference in the percentage of trash extracted between the two lines: 48.2% in Line No. 1 and 62% in Line No. 2.

During the test, samples were taken from the delivery of several machines and a nep count was made. The results are shown in Table V.

When the results of the tests were studied by the mill, it was generally agreed that for their particular mixture, from both cleaning efficiency, nep count and appearance of the stock, that the vertical and the two No. 12s were no longer required. This is not a condemnation of the vertical and the No. 12 opener, which in their own right are efficient machines. However, in this case, used after the low production, high efficiency No. 15—No. 15 sequence, the stock was overbeaten, a condition which would have prevailed regardless of the type of machine following. Fig. 7 shows the mill installation.

These tests have confirmed our belief in the efficiency of a low production flow line. Here the stock is opened at the beginning, and progressively opened to the individual fiber if possible. There is no consolidation of the stock in the reserves or feeding systems until it reaches the reserve preceding the finisher section of the picker. At this point constant density and not volume will lead to a more regular and even lap.

This progressive opening process, with a minimum of beating, is essential. It is our hope that our experiments will enable us to offer a complete opening and picking line using the flow line procedure, with a minimum of beaters, which will do an efficient selective cleaning operation, with little fiber degradation, low nep count and low waste loss. As previously stated, the No. 15 and No. 17 openers, already designed and tested, make up the first part of this new line.

It may appear that with the greater number of low production machines the capital outlay would be higher. But consideration must be given to the fact that the more expensive high production machines will be eliminated, so that a complete low production flow line will differ little in cost. A new installation would probably cost less than a conventional opening and picking line. The advantages of a low production flow line are such that with similar lap production and low cost differential it is now possible to process a lower grade mix, with a final cleaner, better-bloomed, less neppy picker lap.

Table IV

No. 1 Line	Trash	Accum. Wt. of Droppings	No. 2 Line	Trash	Accum. Wt. of Droppings
Feeders-Type A Machine	**2.8%**	**1490.0 grms.**	**Feeders-#15s**	**2.25%**	**3491.4 grms.**
Type B Machine	**2.2%**	**9413.9 grms.**	**No. 17s**	**1.6%**	**8628.7 grms.**

Table V

Position of Sample	Line No. 1 Avg. Nep Count per 10 Grns.	Line No. 2 Avg. Nep Count per 10 Grns.
After Type B Machine	**164**	
After No. 17s		**110**
After V. O.	**237**	**163**
After 2nd No. 12		**198**

SOUTHERN TEXTILE ASSOCIATION

Announces Fall Meeting Schedule

The Southern Textile Association has announced the following schedule for its Fall 1959 divisional meetings:

Oct. 10—South Carolina Division, Clemson, S. C.

Oct. 17—Northern North Carolina-Virginia Division, Y.M.C.A., High Point, N. C.

Oct. 31—Eastern Carolina Division, School of Textiles, North Carolina State College, Raleigh.

Dec. 5—Piedmont Division, Johnston Memorial Y.M.C.A., Charlotte.

All dates listed are Saturdays, and all meetings are scheduled to open at 10 a.m. with the exception of the Piedmont Division which will convene at 9:30 a.m.

The meeting of the South Carolina Division coincides with the date of the Clemson-North Carolina State football game. The Eastern Carolina meeting on October 31 coincides with N. C. State's homecoming game against Wyoming. Special seating for those attending the meetings will be available for both games.

D. H. Roberts

T. B. Stevens

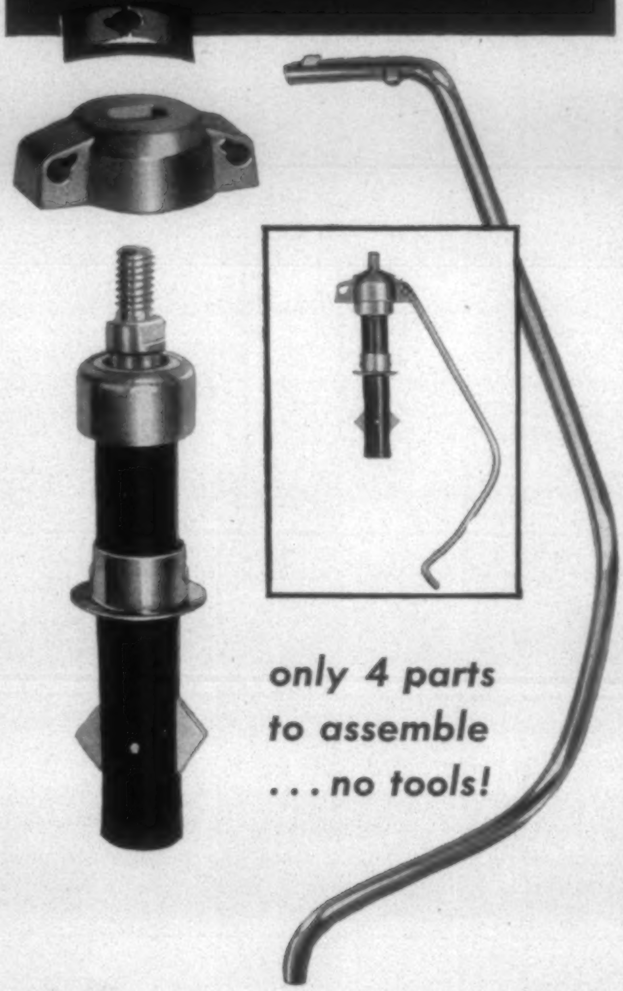
H. W. Buchanan

M. L. Brackett

Program details on the individual meetings will be released by chairmen of the four divisions. D. H. Roberts, Lydia Cotton Mills, Clinton, S. C., is chairman of the South Carolina Division; T. B. Stevens, Erwin Mills, Erwin, N. C., is head of the Eastern Carolina Division; Horace W. Buchanan, Erlanger Mills, Lexington, N. C., is chairman of the Northern North Carolina-Virginia Division; and M. L. Brackett, Highland Park Mfg. Co., Charlotte, is chairman of the Piedmont Division.

The meetings are open to all textile operating executives and their associates, as well as to mill suppliers and their representatives.

NEW BENDIX SPIN-MASTER BOBBIN HOLDER



New simplified design . . . with only four, easy-to-assemble parts! New modern plastic construction . . . for lighter weight, greater efficiency! That's the new Bendix Spin-Master—the most modern bobbin holder in the textile industry!

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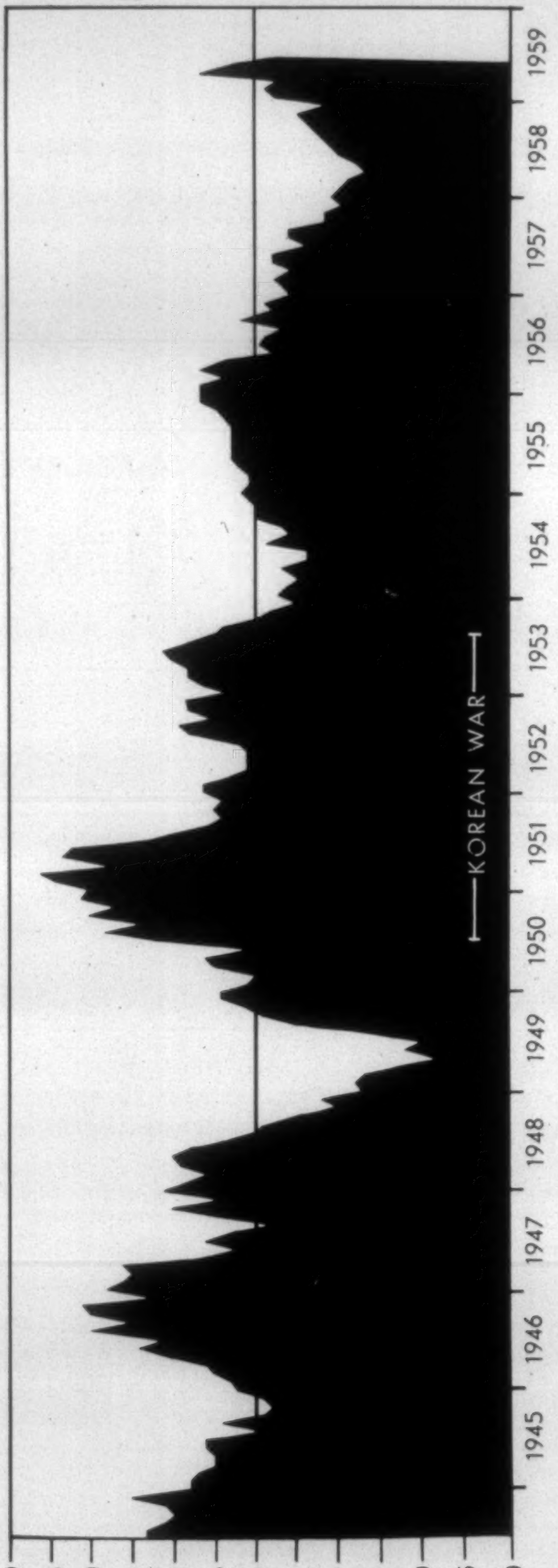
Greenville Textile Supply Co., Greenville, S. C. South Carolina • Georgia • Alabama • Tennessee	FURNISHED AS ORIGINAL EQUIPMENT BY LEADING TEXTILE MACHINE MANUFACTURERS



THINGS ARE *LOOKING UP* IN THE TEXTILE INDUSTRY

By GUS GUGGENHEIM, Associate Editor

A REVIEW of textile industry statistics for the first half of 1959 indicates that the industry has regained the position it held at the beginning of 1956. This comeback was accomplished in the face of adverse governmental policy, the depressing effects of imported textiles, poor cotton crop in 1958 and brisk internal competition. Consumption of all fibers—cotton, wool and synthetic—is on the increase with no signs at this time of letting up.

The current trend may be simply the early stage of another two-year boom cycle. On the other hand, there is much that responsible mill management can do to make it the forerunner of a new era for the textile industry—an era of continuing prosperity free of the feast and famine conditions which characterize the industry.

Cotton consumption, which is tied rather closely with mill profits, has been steadily increasing in the first half of 1959. In fact, since the lowest point of daily average cotton consumption in nine years was reached in April 1958, consumption has increased steadily with only occasional interruption. The last time cotton consumption was as low as the April 1958 figure was in 1949. After the low point was reached in June of that year, consumption skyrocketed. In March 1951, only 22

The erratic nature of daily average cotton consumption in the U. S. is clearly shown on this shadow-graph. The average consumption is expressed in terms of a percentage of the 1947-49 average consumption. The textile industry has been described as operating on a two-year boom and bust cycle. However, time intervals between peaks in cotton consumption shown here since 1944 have been 25, 19, 20, 15, 27, 31 and 39 months.

months later and due in part to the Korean War, it was at a level unprecedented since the end of World War II, a peak not reached since then.

Increases in wool consumption in 1959 have been spectacular as compared with 1958. To be sure, the production of woolen fabrics is not what it was 10 to 15 years ago. However, month by month gains in wool consumption show: January 1959—56% above January 1958; February 1959—44% above February 1958; March 1959—38% above March 1958; April 1959—76% above April 1958; May 1959—56% above May 1958; and June 1959—32% above June 1958.

Similar gains, though not quite as large, were registered by all other fibers spun on the woolen and worsted systems during the period.

The improvement in wool consumption is seen from the statistics for the first 26 weeks of 1959 compared to the same period in 1958.

Wool Consumption

(Pounds Scoured Basis)

January-June

Classification	1959	1958
Woolen System	65,931,000	53,890,000
Worsted System	72,468,000	47,987,000
Apparel Class Total	138,399,000	101,877,000
Carpet Class	86,193,000	49,067,000
Raw Wool Total	224,592,000	150,944,000

The number of woolen and worsted looms in place at the end of 1958 dropped to 17,310 from the 18,433 at the end of 1957.

Man-Made Fibers

The daily average consumption of man-made staple fibers for the first 26 weeks of 1959 was approximately 17½% greater than during the same period in 1958. In the 11 months prior to June 1959 the consumption of man-made fibers increased by 67 million over the similar period to June 1958. The actual total amounts used during the periods are 462,536,000 and 395,608,000, respectively. The daily averages of poundage consumed for the first 26 weeks of 1958 and 1959 are:

Daily Average Pounds Consumed

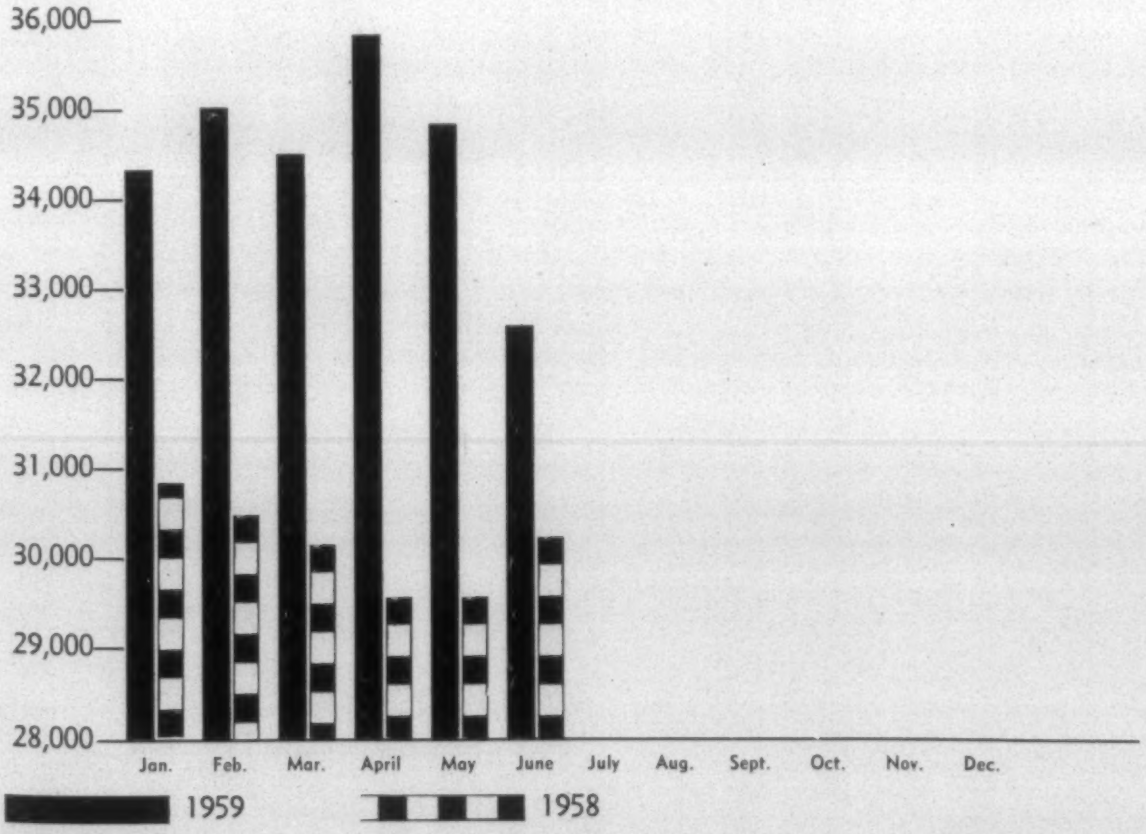
(Thousand Pounds)

Month	1959	1958
January	39,706	42,353
February	40,442	32,289
March	46,594	32,910
April	39,631	36,734
May	40,008	31,543
June	46,192	32,311

Tire Cord

Production of tire cord and tire fabric during the first quarter of 1959 kept pace with the general boom in textiles. The first quarter production amounted to 123,374,000 pounds. Not since the first quarter of 1957 has such pro-

COTTON CONSUMPTION Daily Average Bales Used In The U. S.



duction been achieved. The first quarter of 1959 was some 9% above the last quarter in 1958 and 20% above the first quarter 1958. During the January-March period this year, some 78,020,000 pounds of rayon tire cord and tire cord fabric was produced. In the same period 31,680,000 pounds of nylon tire cord and tire cord fabric was made. Cotton accounted for 9,885,000 pounds of the tire component.

Cotton Consumption Erratic

Down through the years since the end of World War II the daily average consumption of cotton has been quite erratic. To say that the industry follows a two-year boom and bust cycle is not precisely true. Fig. 1 shows a chart of the daily average consumption from August 1944 through June 1959.

Peaks in consumption can be easily picked out. Cotton consumption reached peaks in August 1944; September 1946; May 1948; January 1950; March 1951; June 1953; January 1956; and possibly April 1959 depending on future events. The time intervals between these peaks are: 25, 19, 20, 15, 27, 31 and 39 months.

The two lowest daily average cotton consumption figures since World War II were recorded in May 1949 and April 1958. Highest consumption peaks occurred during the post World War II period in September 1946 and during the Korean War in March 1951. The longest period of relatively high cotton consumption during peacetime was from June 1953 to November 1957.

Man-Made Broad Woven Goods

Man-made broad woven fabrics except rayon or acetate flat and twisted filament fabrics, also recorded high consumption during the first quarter 1959. Over 200 million linear yards of fabrics made of nylon, acrylic and polyester fibers were produced during the period. Production in the first quarter 1959 was 10% above the first quarter 1958. First quarter 1959 production was almost 900% greater than the level of production recorded in the 1947-49 base period. During the first quarter 1959 rayon and acetate fabrics, other than felt and twisted filament, were produced at a rate approximately 130% of the 1947-49 base period.

Production of rayon and acetate flat filament fabrics—such as taffetas, twills, serges and satins—during the first three months of 1959 amounted to nearly 139 million linear yards. First quarter 1958 production of these goods amounted to over 142 million linear yards. Twisted filament fabrics of rayon and acetate, such as crepes, crepe satins and failles, also experienced reduced production in 1959's first quarter. From January through March this year, some 25.2 million linear yards were produced. During the same period in 1958, approximately 30.3 million linear yards were woven.

The production of rayon and acetate flat filament fabrics during the first quarter of 1959 was about 80% of the 1947-49 rate.

Thus the trend at the present is upward in cotton, wool and synthetics. By producing realistically—for orders instead of inventories—while the market is in its improved state, textile mill management can go far toward making this trend part of a continuing upward movement for the industry and not just another boom in the boom and bust cycle.

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BOYCE WEAVERS KNOTTER GASTONIA, NORTH CAROLINA

The **LOOMFIXER** And His Job

Part Ten

By WILMER WESTBROOK

THE term "automatic loom" is used to designate a loom that has an attachment to automatically replace the exhausted bobbin in the shuttle with a full one. There are a number of different types of filling replenishment mechanisms, but the most commonly used one is the rotary battery.

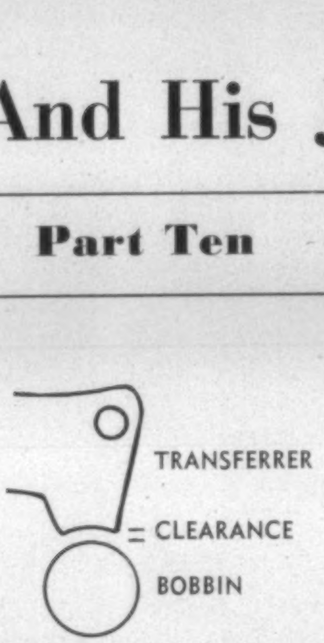
There are several mechanisms that are closely allied with the battery—such as the filling motion, the shuttle feeler, the thread cutter, the lay and the transferrer. It is important that all these mechanisms be set correctly because a malfunction of any one of them will seriously affect the performance of the others. Gauges are important in all loom settings—for the battery they are a must.

There are several preliminary steps that should be taken before a new battery hopper is installed. The rocker shaft, the rocker shaft bearings and the swords should be checked to see that they are tight and in good condition.

Use a lay centering gauge to place the lay in correct position. Each lay has a vertical line cut into it and there is a notch in the back of the breast beam. The gauge is used to align these two points. Since the breast beam is stationary, the aligning must be done by loosening the swords and moving the lay. The lay must also be squared, the reed and back boxes aligned.

There are five gauges that are commonly used to align the battery. They are the battery height gauge (inside), the battery height gauge (outside), the battery aligning gauge, the battery end gauge, and the bobbin support gauge.

The battery height gauge (inside) is used to place the hopper stand at the correct height above the lay. This gauge has a GO and a NO GO top surface. Place the gauge on the lay end plate and slide it under the machined part of the hopper stand. If the hopper stand is too high, remove it and file some of the metal off the lugs. File the lugs evenly so the hopper stand will rest squarely on each of them. If the hopper stand is too low, use a shim especially made for the purpose or have the lugs built up by brazing or welding with a metal soft enough to be filed. Align the hopper stand until the GO part of the gauge will slide under the stand but the NO GO part will not clear.

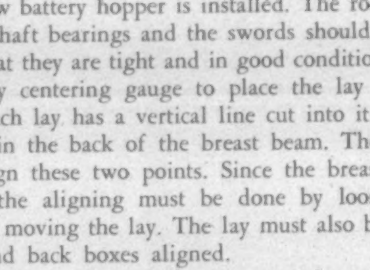


The clearance between transferrer and bobbin should be 1/16-inch for slow speed looms and ⅛-inch for high speed looms.

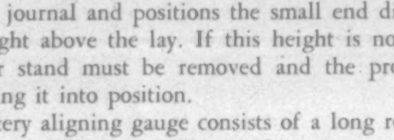
The battery height gauge (outside) fits over the end of the battery journal and positions the small end disc at the proper height above the lay. If this height is not correct, the hopper stand must be removed and the proper lugs filed to bring it into position.

The battery aligning gauge consists of a long rod equipped with two sliding arms. To use this gauge, remove the transferrer stud from the hopper stand and insert the rod in its place, the long end extending toward the center of the loom. One arm is placed against the inside surface of the back box and the other is slid along the rod with its outer edge contacting the reed. When the hopper stand is positioned correctly it should be securely bolted to the breast beam and the gauge removed.

Another important setting is that of the hopper stand in relation to the end of the lay end. The battery end gauge is used for this setting. The gauge point is placed against the aligning point of the hopper stand and the stand is moved in or out until the aligning notch of the gauge is even wtih the end of the lay end. Some of these gauges have several notches and are used for different lengths of shuttles. Be sure you know which notch to use for the shuttles in your looms.



The battery height gauge (inside) has a GO and NO GO surface.



The latch finger should be set so that the bunter will strike the notch of the finger correctly and will not slide up or down.

The bobbin support gauge is used to get the correct learance between the bobbin support and the bobbin uide.

There are a number of settings that must be made to he battery after it has been installed. There should be a learance of $\frac{1}{32}$ inch between the transferrer and the opper stand with the bobbin held against the bobbin guide y the feed pawl.

With the bobbin against the guide, turn the eccentric n the hold back pawl so that there will be a clearance of $\frac{1}{4}$ inch between the point of the hold back pawl and he ratchet tooth. Turn the battery and see that the pawl drops easily into place and that there is the proper clearance at each tooth.

The notch of the latch finger should meet the point of the bunter squarely as they engage for a filling transfer. If the latch is set too low it may slide off the bunter or force the transferrer too deep in the shuttle. If the latch is set too high it will slip downward until the bunter enters the notch but a false notch will be formed where the bunter strikes the latch and sooner or later the bunter will hang in this false notch and cause a break-out or damage to the transferrer or shuttle.

After the new bobbin has been forced into the shuttle there should be a clearance of $\frac{1}{16}$ inch between the transferrer and the rings of the bobbin on slow speed looms and $\frac{1}{8}$ inch clearance on high speed looms. The transferrer spring should have enough tension to prevent the transferrer from driving the new bobbin out of the shuttle. Correct tension can usually be obtained by turning the spring collar about one-half turn with the spring under tension. To check this setting, cause the transfer motion to operate with a bobbin in the shuttle but with the battery empty.

Ashworth Bros. Moves Charlotte Facilities To New Quarters

Ashworth Bros. Inc., has relocated its Charlotte, N. C., offices and machine shop to 222 Rampart St. The new building housing the Southern operations of the company is made of brick and steel construction. Office area is completely air-conditioned. Machine shop and warehousing areas are protected from heat with heavy layers of aluminum foil cased insulation in the roof. The shop is cooled with exhaust fans and has concrete flooring. The entire building is lighted with fluorescent fixtures.

Among the machine shop operations done in the new building are flat covering and grinding, flexible bend grinding, cylinder and doffer surface grinding, and metallic base wire installation.

Additional floor space has been provided at the building for warehousing card clothing, card parts awaiting repair or shipment, etc. The new building has truck loading docks and facilities and a large parking area. John Reed is Southern manager for the company.

Twenty-Six U. S. Firms To Exhibit At Milan

Of the 622 exhibitors at the 3rd International Textile Machinery Exposition, September 12-21, in Milan, Italy, 26 will be U. S. manufacturers. The international series of textile machinery exhibitions started in 1951 in Lille, France, and was continued in 1955 in Brussels, Belgium. Expectations are that this exhibition will be attended by the largest crowd ever to attend a textile machinery show.

The following is a listing of the U. S. exhibitors at the show along with a brief description of the products to be displayed and personnel in attendance.

American Laundry Machinery
New York City

Armstrong Cork Co.
Lancaster, Pa.

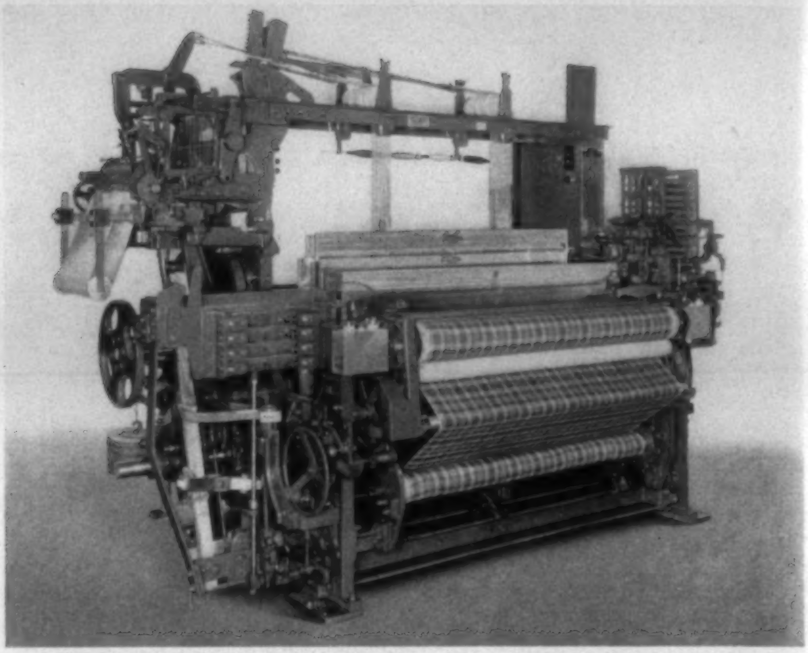
Armstrong will show its Accotex roll coverings and aprons, loom take-up roll coverings, loom press roll coverings, loom binders, and clearer coverings.

Jay Hershey, R. C. Stork, G. A. Smith, A. A. Thouin, M. Preysch, N. Curwen, R. Schneider, T. L. Hill, R. Minet.

Barber-Colman Co.
Rockford, Ill.

Barber-Colman will show its new 66 GSH warp drawing machine.

W. P. Turner, C. Almond, P. Middleton, M. Konig, W. Beck, T. Tegland.



CROMPTON & KNOWLES CORP. will display its C-7 loom at the international exhibition in Milan. The show model will be 56 inches between swords, with a maximum spread of warp in the reed of 50 inches. It will be operating at new high speeds for a loom of this width and construction on a four-shuttle cotton dress goods and will be equipped with a 20-harness, 15/32-inch gauge, cam driven dobby.

Crompton & Knowles Co.
Worcester, Mass.

This display will feature Crompton & Knowles' needle loom, PAPA loom and W-3A loom manufactured in Italy.

Frederick W. Howe Jr., Joseph F. Malloy, Albert Palmer, William O. Fisher, Andre Manuel.

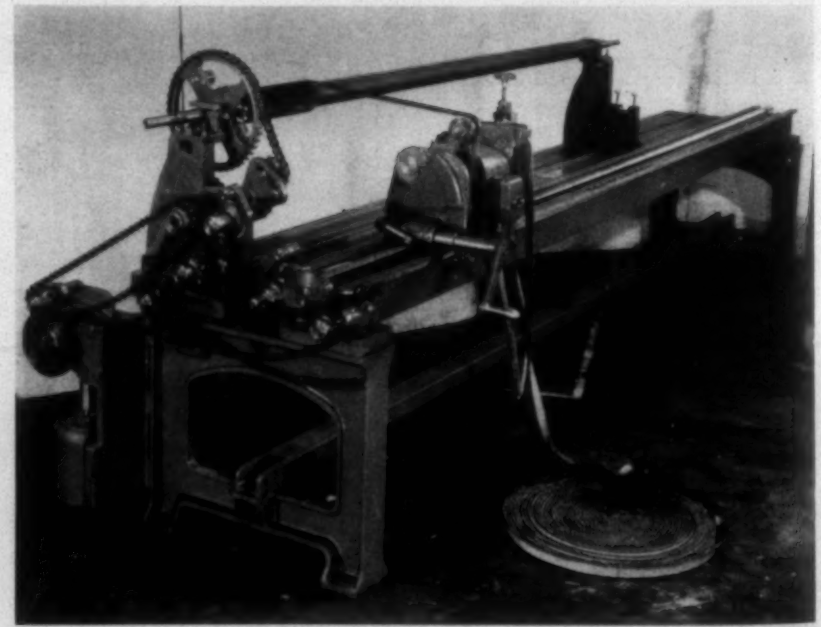
Curlator Corp.
E. Rochester, N. Y.

The Model 40-B Rando-Feeder and Rando-Webber will be shown in this booth.

Gordon B. Harvey, Dr. K. T. Lendt, Richard B. Castor.

Deering Milliken Research Corp.
Spartanburg, S. C.

Machinery to manufacture Agilon textured yarns will be shown publicly for the first



DRONSFIELD BROTHERS LTD. will feature its Card Roller Mounting Machine No. 61 at the Milan textile show. The unit is equipped with a special tension head for automatically controlling tension of the fillet for the mounting of card fillet on all types of card raising rollers, card rollers, clearers, workers and strippers, fancies, burnishing and stripping rollers, etc.

ime by D.M.R.C. Two newly designed nodels, the 2086 for fine deniers and the 110 for medium deniers will be exhibited. The machinery was constructed by Hobourn Aero Components Ltd., Rochester, England.

Russell B. Newton, N. C. Armitage, C. G. Evans.

Draper Corp.
Hopedale, Mass.

Draper will exhibit its new shuttleless loom weaving denim fabric.

Thomas H. West, Marshall Newell, Harry Foster, G. Samaden.

Eastman Machine Co.
Buffalo, N. Y.

Fabrionics Corp.
Halesite, N. Y.

Fabrionics will show its warp monitor, Quix stop end-break detector, and Una-Mag tension control.

Olen P. Marks, Carl Land.

James Hunter Machine Co.
North Adams, Mass.

This display will feature Fiber Meter blending equipment.

James H. Hunter, W. F. Leineweber, Karl T. Lendt.

Kidde Textile Machinery Corp.
Bloomfield, N. J.

Proctor & Schwartz Inc.
Philadelphia, Pa.

The company will show impregnation, drying, tentering and curing equipment for anti-crease finishing and the new Artos screen printing machine.

Representing Proctor & Schwartz will be its German affiliate Artos Maschinenbau.

Prosperity Co.
Syracuse, N. Y.

Roberts Co.
Sanford, N. C.

Roberts will show its new Arrow M-1 cotton system spinning frame and the Arrow WM-2 long fiber worsted system spinning frame.

Robert E. Pomeranz, Jonathan N. Pomeranz, Germinal N. Giraudi, Alejandro Bautista, Fred Glass.

Saco-Lowell Shops
Boston, Mass.

The company will show preparatory and spinning machinery for cotton and synthetic fibers.

R. P. Newell, W. F. Lowell, H. M. Dolby.

Scott & Williams Inc.
New York City

Singer Sewing Machine Co.
New York City

Southern Textile Machinery Co.
Paducah, Ky.

Super Tufter Machinery Co.
Ft. Olgethorpe, Ga.

Supreme Knitting Machine Co.
Ozone Park, N. Y.

Torrington Co.
Torrington, Conn.

Universal Winding Co.
Providence, R. I.

Universal will exhibit its Unifil loom winder, #44 Roto-Coner and Model 10 ring twister.

Robert Leeson, Paul P. Johnson, J. A. Nasmith, H. H. Richardson, W. V. Geedhme, A. N. Verrier, J. F. Ernault, H. Raus, P. Bossi, Rene Aghion.

Warner & Swasey Co.
Cleveland, Ohio

The company will display its M-3700 wide set-over pin drafter intersecting draw frame with dual-can delivery and eight-ball creel. Also on exhibit will be the M-3680 dual-head pin drafter intersecting draw frame with dual ball delivery and can creel.

Thomas L. Stilwell, Herman B. Huster, Charles Watt, Sergio Giraudi.

Warner Electric Brake & Clutch Co.
Beloit, Wisc.

Whitin Machine Works
Whitinsville, Mass.

Whitin will show its new Super Lap machine, Even-Draft drawing frame, Model Super J comber, Quik-Set roving frame, Piedmont spinning frame (full length) and Model KW spinning frame (72 spindles).

J. Hugh Bolton, E. Kent Swift Jr., J. H. Bolton Jr., E. M. Kennedy, Robert Dalton, Dr. Zoltan Szaloki, George F. McRoberts, Andre Manuel, G. Samaden, Eric Morvay, A. E. Aspinall.

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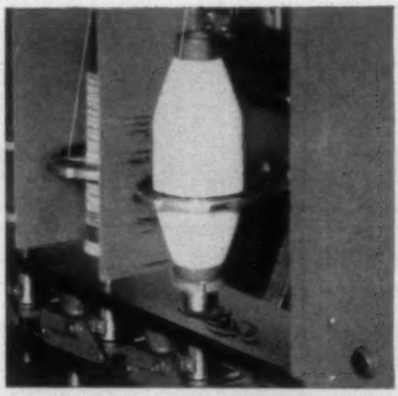
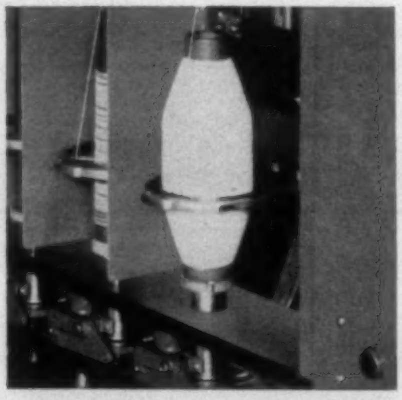


Ordinary ring oils blacken yarn, cause loss of production



White NON-FLUID OIL stays on rings increase output per frame

White NON-FLUID OIL does not spread out on rails to spatter bobbins. It stays on rings and lubricates effectively. This eliminates blackened yarn, reduces broken ends to a minimum; or more simply, it increases your output per frame.

White NON-FLUID OIL adheres to wearing surfaces. Its exceptionally high lubricating properties and tenacious nature keep travelers running almost friction-free. This reduces the pull at high speeds, resulting in fewer broken ends, and a yarn of more uniform quality.

White NON-FLUID OIL is neutral; it does not become gummy; therefore it lasts longer on wearing surfaces than petrolatum, liquid oil or ordinary ring greases. And you effect still another saving! *Fewer applications and less lubricant are needed.*

Send for free testing sample of White NON-FLUID OIL and Bulletin T-16. You'll be amazed at the difference.

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

WHY ARE MILLS APPROACHING 10 ENDS DOWN PER 1,000 SPINDLE HOURS?

More and more modern mills accept 10 ends down per 1,000 spindle hours as a practical, realistic goal. Just a few years ago, such production efficiency was an impossible dream. Today, textile labs in these mills are equipped for continuous quality control in manufacturing.

As the number of ends down drops, spinners are reassigned, reworkable waste costs are drastically cut and profits rise.

How is the impossible becoming a reality? When lap, sliver, roving and drawing are free of weak spots, maximum spinning production follows.

The Uster Corporation demonstrates continuous control at all stages of yarn manufacture.

What is Continuous Quality Control?

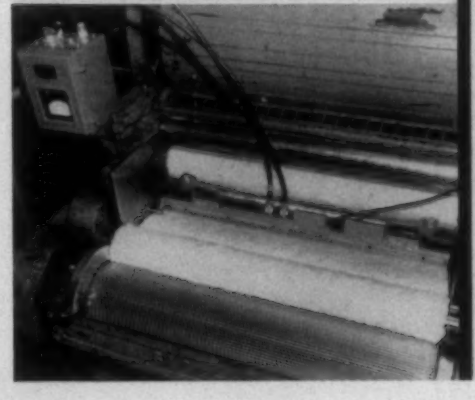
AT THE PICKER . . .

An inch of picker lap drafts into yards of finished yarn. Control of the lap automatically insures greater efficiency in later stages. The **Uster Varimeter** polices the lap inch by inch, indicates irregularities, offers continuous lap control, reduces neps, pinpoints mechanical faults, gives better control of yarn sizes with fewer doublings, reduces gear changes in processing.

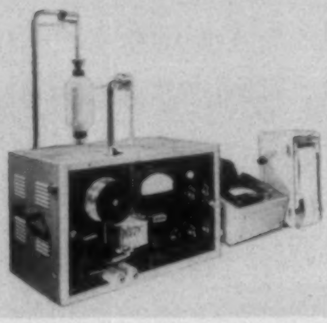
AT THE CARD . . .

Control of sliver mass makes for smoother operation throughout manufacture. The **Uster Evenness Tester** offers precise scientific methods of controlling variations in the sliver. Mechanical difficulties in the card and card clothing show up quickly to improve production of the card. Sliver irregularities are indicated, neps are reduced, faulty settings and mechanical irregularities are revealed.

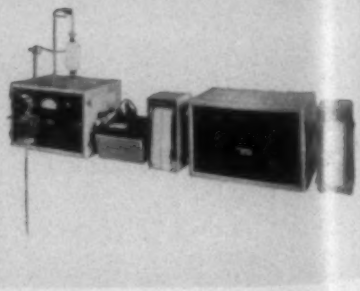
VARIMETER
Picker



EVENNESS TESTER
Card
Drawing Frame
Roving Frame
Spinning Frame



SPECTROGRAPH
Card
Drawing Frame
Roving Frame
Spinning Frame



AT THE DRAWING FRAME . . .

Here is the last and most critical point of doubling control. Here it is important to spot mechanical troubles, define proper blend, predetermine roll settings and determine the effect of roll spacing, bi-directional drafting, humidity and draft. The **Uster Evenness Tester, Uster Spectrograph** and **West Point Cohesion Tester** team up to do these things. Production machinery settings, mechanical condition of machines and short to medium to long-term variations are proved.

AT THE ROVING FRAME . . .

Improper drafts, settings and weightings are shown up by the Uster **Evenness Tester** and the Uster **Spectrograph.** Here is the latest concept in evaluating short, medium and long-term variations that determine precise quality control. Machinery settings are verified; mechanical faults are exposed. **West Point Cohesion Tester** eliminates numerous tests for fiber fineness, fiber length, surface characteristics, wax content, etc. Achieves optimum twists. **Uster's Custom Tension Recordograph** allows control of speed, most critical factor in production.

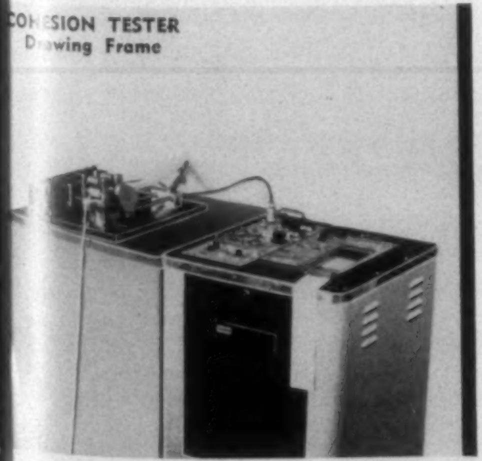
AT THE SPINNING FRAME . . .

Final fabric appearance is irrevocably determined at the spinning frame. **Uster Evenness Tester** and **Uster Spectrograph** work together for fast and effective control of variations. **Uster Strength Tester** automatically registers individual values of breaking strength and elongation, sum of breaking strength and elongation and frequency distribution of breaking strength. 5, 10, 20, 40 tests per bobbin eliminate 90% of technician's time in single strand testing. **West Point Cohesion Tester** predicts drafting properties of synthetic, natural and blended staples. **Uster's Custom Tension Recordograph** shows up bad skewers and defective bobbin holders, reveals heavy travelers and grooved rings, produces extremely accurate adjustment of winder tension. Tension control in spinning, twisting, winding and spooling becomes critical as production is speeded. **Uster Imperfection Indicator** shows high and low count at any instant. Weak spots, excessive peaks, heavy spots and nep count in samples are easily shown. Yarn is inspected automatically.

TENSION RECORDOGRAPH
Roving Frame
Spinning Frame
Weaving
Quilling

STRENGTH TESTER
Spinning Frame

IMPERFECTION INDICATOR
Spinning Frame



COHESION TESTER
Drawing Frame

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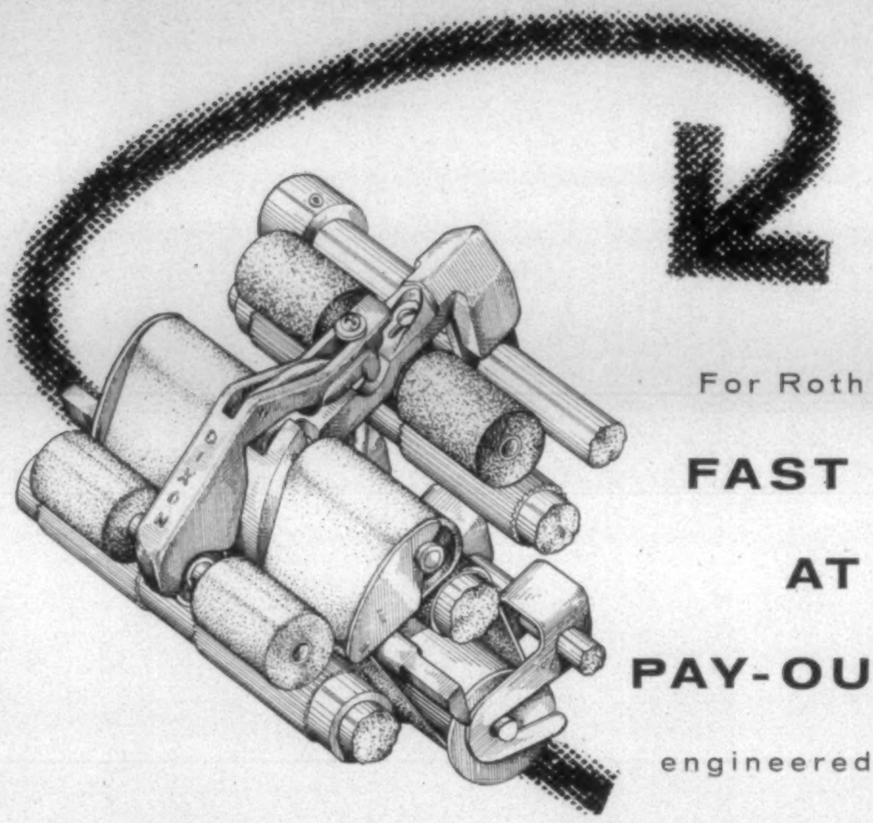

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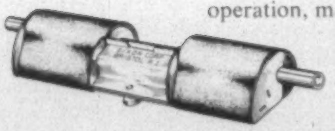
Dixon offers the perfect balance of a proven product plus engineering know-how . . . a combination which has produced many fast pay-back changeover plans for spinning mills*. Each Dixon plan is more than just equipment. Our engineers will gear the program to the mill's cash flow, helping to provide major economies on a systematic schedule.

While Dixon Spinning Changeovers are often installed complete in one operation, many mills take advantage of our multi-step changeover program.



On Roth System Frames, the usual plan calls for first adding new middle top rolls, aprons, and cages. Immediate cost-savings result through less lubrication, fewer laps and ends down, reduced cleaning . . . AND LONGER DRAFTS!

Systematic completion of the Double Apron Roth changeover can be made to suit the individual mill. The final Double Apron Roth changeover eliminates all oiling and cap bars, increases drafts, and gives our customers the most competitive spinning efficiency:

- Middle and back rolls run on RULON . . . the oil-free bearing that never is lubricated . . . outwears nylon 12 times.
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- All parts are maintenance free. Pay-back on your investment is a matter of months.
- Productivity and quality improve. Yarn is cleaner . . . seconds decrease.

Compare "Pay-Out versus Pay-Back" on *both* Roth System changeovers being offered to the trade and you'll buy Dixon. Ask for our detailed report showing how an actual installation was completely paid for in 25 months and is now saving $1.50 per spindle per year by using Dixon Changeovers.

Dixon Corporation, Bristol, Rhode Island. Southern Sales: Dunson & New, Inc., Box 9202, Greensboro, N. C.; Box 321, Greenville, S. C.; Box 445, West Point, Ga.

*Here are a few of the more than 2,000,000 spindles installed:

Mill	Spindles	System
Deering Milliken	121,500	Double Apron Roth
J. P. Stevens	72,800	Double Apron Casablancas
Clinton Cotton Mills	85,612	Double Apron Casablancas
Crompton Highland Mills	10,300	Double Apron Roth
Adelaide Mills	12,122	Double Apron Casablancas

Dixon

Engineered devices for weighting and guiding top rolls since 1876

Let's Have A **Realistic** Federal Depreciation Policy

By ROBERT LEESON, President, Universal Winding Co., Providence, R. I.*

DEPRECIATION is both a cost of doing business and a source of funds. It is as much a cost of doing business as wages, rent or interest. For if the loss in value of capital assets due to deterioration and obsolescence is not covered, the company will be forced to go out of business in the long run just as certainly as if it had not recovered any other cost. Put another way, to the extent that the cost is not accurately appraised through inadequate depreciation allowances, capital consumption is taxed as income. At the present very high corporate rates of 52% this is not only grossly inequitable but it obviously retards progress through the resulting erosion of business capital.

Let me simplify this concept of depreciation. Taxes are levied to raise revenue to meet government expenses. Machinery and equipment, which over a period of time become obsolete or wear out, must be replaced. So its purchase cost, or replacement cost (whichever is used) is expensed over *some* period of time, as a cost of doing business. As it is expensed it is charged against earnings and this reduces taxes paid.

No one argues that the expenditure for replacement of machinery and equipment is not a cost or a proper charge against earnings. It is called depreciation. Whatever the period of depreciation, the charge against earnings and the deduction from taxes is eventually the same identical amount. The government revenue from taxes is eventually the same identical amount. Only the rate of collection can be affected. Therefore it would seem the only possible legitimate reason for *not* allowing a shorter period of depreciation is the fear of loss of revenue in the immediate year or years after the change. But if it could be shown that a shorter period of depreciation stimulated business, thus creating more earnings and more employment, and thus, at least in the long run, more taxes collected by the government—then one would wish to measure this advantage against the disadvantage of a temporary lowering of the rate of tax collection.

There have been reams of testimony to show that, with a shorter depreciation period, more machinery and equipment would be purchased by industry; and I will not restate the arguments proving this fact.

This machinery would not be purchased *unless* it could save the purchaser operating costs. The saving in operating cost must go either to increases in: (1) earnings; (2) wages; or (3) lower prices. Increased earnings and wages would directly produce increased tax revenues. Lower prices would enable the purchaser to compete more favorably against importations or broaden the market for his product; and thus also increase earnings or wages with the resultant increase in the revenues.

The importance of depreciation as a source of funds for investment is shown by the fact that in recent years corporate depreciation accruals have averaged more than 60% of the total funds for plant and equipment expenditures. In other words, business looks to depreciation accruals as the primary source of business funds, and therefore they must be adequate. Small business is peculiarly dependent upon depreciation allowances. In the first place, high taxes do not permit sufficient earnings. Further, the problems of accumulating sufficient earnings for reinvestment are accentuated by the accumulated earnings surtax—this is especially true in the case of capital goods manufacturers who must operate in terms of long production cycles and correspondingly long-range planning and heavy investment. Moreover, for smaller capital goods companies which manufacture highly engineered products, extensive reserve funds for research and development represent the life blood of the organization. Finally, access to outside funds is neither feasible nor readily available to small business. These problems are magnified in a swiftly changing technological era since the cost of failing to remain competitive through the employment of modern plant and facilities is of course much greater.

The retardation of economic growth is one thing when an economy is immune to foreign competition. It is even more serious when, as at the present time, this is not the case. Undoubtedly any failure on our part to keep abreast of foreign business in research and development, levels

The American Textile Machinery Association is continuing to lead the textile industry's struggle for more realistic governmental depreciation policies. Rates in keeping with the times are a must if the industry is to be in a position to take advantage of the many new developments being offered by American textile machinery manufacturers. Is it a hopeless fight? The comments presented here are intended as a progress report of sorts of efforts being extended. They were made by Mr. Leeson before the Senate Subcommittee on Taxation.

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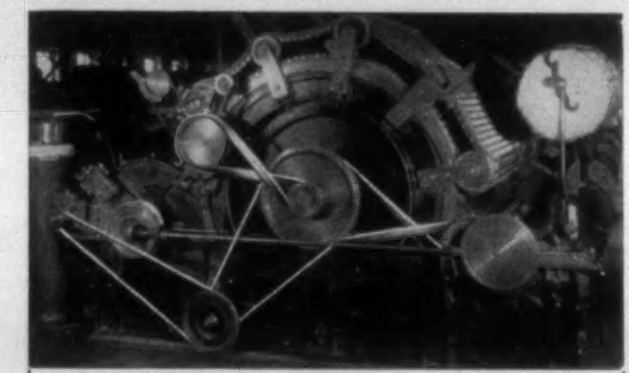
*A statement presented before the U. S. Senate Subcommittee on Taxation.



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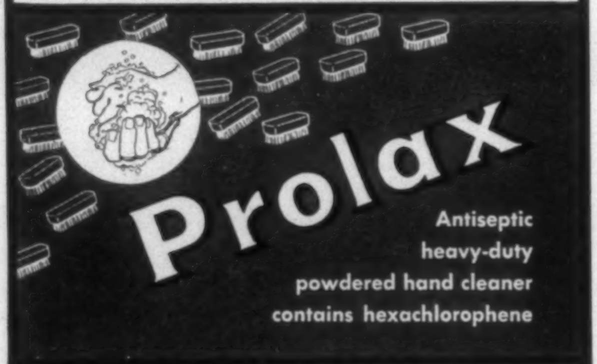

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of over-all costs, and credit terms and conditions cannot help but seriously undermine the U. S. position both in foreign markets and at home as well. The only method open by which the U. S. can remain competive is through maintaining a modern plant and equipment. Yet by almost any standard of measurement our country has the most backward system of tax depreciation followed by any industrial nation. For example, a comparison was made between the U. S. system of depreciation and the considerable variety of depreciation systems employed abroad and presented in testimony by Maurice Peloubet before the Ways and Means Committee of the House in January 1958; a further striking example is that of the additional 30% first-year writeoff allowance authorized for British investors in the last session of Parliament.

Taxation

As stated before, the purpose of depreciation is to provide a reasonable allowance for current capital consumption. Whether or not the allowance is reasonable depends upon (1) the pattern of writeoff; (2) the amount of writeoff; and (3) the period to which the writeoff methods apply.

Pattern Of Writeoff

Provisions of the Internal Revenue Code of 1954 substantially improved tax treatment of depreciation by adoption of more realistic writeoff methods which take into account the more rapid depreciation of assets in the earlier years of their use. I should add at this point, however, that this does not mean that the present writeoff patterns might not be adjusted to take into account other shortcomings of the current depreciation system. For in the two remaining aspects—the amount of the writeoff and the period to which the writeoff methods apply—current provisions greatly understate capital consumption—the first because of the underdepreciation from inflation; the second because the present I.R.S. concept of "useful life" does not adequately reflect current and future levels of technological advancement or, to put it another way, the effect of obsolescence. In connection with this latter point I have been told that top I.R.S. and Treasury officials have at least to some extent acknowledged the distinction between measuring useful lives in terms of pure passage of time as against full consideration of technological obsolescence, present and prospective. However, at the same time, I understand that the necessary administrative procedures in the field to put the philosophy into practice have not yet been undertaken.

Amount Of The Writeoff

The deficiency of historical-cost depreciation resulting from our present inflation is greater than ever. A Machinery and Allied Products Institute study, *The Tax Depreciation Problem*, June 1958, reports that American industry pays income tax each year on something like $6 billion of capital consumption caused by underdepreciation. The effect of this is to decelerate progress in an economy which has as its objectives economic growth and rising standards of living.

The Period Of Writeoff

Unrealistic estimates of future life expectancy of plant and equipment can in large part nullify the gains made through the adoption of the new writeoff methods provided for in the 1954 Code.

With respect to the Treasury's Bulletin F lives, last revised in 1942, we think it imperative that the committee give its most careful attention to the broad sweep and explosive pace of technological development. On the basis of my experience in industry there is an apparent general trend toward increasingly rapid introduction of new product, new models and major innovations in existing equipment. What is the significance of this technological revolution for Bulletin F lives? We venture the suggestion that most of our manufacturing methods will undergo drastic changes in the next 10 to 20 years and that facilities and equipment now considered competitively productive for a "normal" span of years will be outmoded and replaced long before their inherent usefulness is exhausted. When you combine automation, new metals, new technologies in electronics, atomics, etc., tremendous increases in size and horsepower of end products, and related plant and productive equipment, the impact on obsolescence is extraordinary and its prediction correspondingly difficult.

Because the Treasury Department appears to insist on a useful-life concept which is based primarily on *past* experience and does not adequately reflect our present explosive business technology, such unrealistic estimates are almost inevitable. Unfortunately, many business firms have been forced in recent years to retain equipment long beyond the period of economic justification due to war and postwar shortages and inflation; and these same taxpayers frequently now find themselves in the position of being required to establish unrealistically long future life estimates on new equipment as a result of their unfortunate historical experience. Consequently, the taxpayer is forced into depreciation and replacement policies which are unsound both for the taxpayer and the economy as a whole.

These problems are especially prevalent in the case of small business which may be deficient in outside legal counsel and tax advice and in funds to fight its particular case through the Internal Revenue Service and possibly eventually through the courts. Further, it is in the small company that primary emphasis is placed upon historical records and the company has a particularly difficult time in changing its equipment acquisition and replacement practices. In other words, by virtue of its past mistakes and the administrative emphasis of I.R.S. on history, the company finds itself in a vicious circle of retarded equipment policy.

I might add at this point that the problem of measuring useful lives for depreciation purposes and the general question of technological obsolescence was developed in detail in a presentation by the American Textile Machinery Association to the Internal Revenue Service filed jointly with the American Cotton Manufacturers Institute in July 1957. It was dealt with subsequently in July 1958 in a statement of James S. Hunter, president of the American Textile Machinery Association, before the Senate Interstate and Foreign Commerce Subcommittee investigating the problems of the textile industry. In addition, this special Subcommittee, also known as the Pastore Committee, recom-

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Representatives: Thomas H. Watson, Maiden, N. C.
Smith, Crawford and Teat, West Point, Ga.

mended that the useful life problem be given careful attention.

Corrective Measures

I believe that the ultimate need and goal of further modernization of depreciation policy is clear. I think that some further substantial reform is necessary and that the reform in terms of degree must go much further than that which was enacted in the special initial writeoff enacted in 1958. It is not my purpose to urge any particular approach, but I would respectfully submit to the committee that the proper allowance for underdepreciation from inflation and recognition of current and future rates of technological advancement could be attained through any one or combination of the following methods:

(1) a direct adjustment for inflation;

(2) the adoption of a triple-declining-balance writeoff;

(3) the extension of the initial writeoff through the elimination of the $10,000 limitation;

(4) the class-rate approach as employed in the Canadian system with the proviso that the rates would be such that they would insure a substantial improvement in writeoffs over the present U. S. methods; and

(5) reinvestment depreciation as it was presented in the 1958 general tax hearings held by the Ways and Means Committee.

I would suggest that action along these lines is indispensable to the optimum rate of growth for industry.

Utilization Of Current Methods

Much discussion has taken place over the extent to which business has adopted the new, more realistic writeoff methods permitted under the 1954 Internal Revenue Code. In 1956 the Machinery and Allied Products Institute conducted a survey on this subject. At that time questionnaires were distributed to 491 manufacturers of capital equipment; of those returned, 296 (60%) contained replies which could be tabulated. Two-thirds of this number indicated adoption of one of the new methods of depreciation authorized by the 1954 Revenue Code; and 85% were using the same rates and methods for both financial reporting and income tax purposes.

In a 1959 survey of the Institute's Accounting and Financial Councils this trend was continued. In fact, the shift to the new methods—double-declining-balance and sum-of-digits—was remarkable. Some 92% of the respondents reported that they adopted these methods (29% double-declining-balance, 42% sum-of-digits, and 21% using a combination) with the remaining 8% continuing to use straight-line depreciation.

Further, almost 90% of these companies use the same rates and methods for both income tax and accounting purposes. The remainder use different rates for financial reporting purposes than they do for tax purposes.

The survey results obviously indicate: (a) extensive use in industry of the new writeoff methods permitted under the 1954 Revenue Code; and (b) similarity of treatment of depreciation for both income tax and internal accounting purposes.

Administration Of Depreciation Provisions

On occasion, as this committee well knows, the intent of Congress may not be put into practice by a government agency or that intent may be circumvented through a misapplication of administrative policy. Further, there may be sound policy at top levels in the Internal Revenue Service but these are not always followed in the field. I am told that to some extent this has been the situation in the period since Congress provided for more realistic writeoff methods in the 1954 Code. Let me give you an example that has been brought to my attention.

With respect to useful lives, as noted above, the Internal Revenue Service, through its field agents appears to place too much emphasis on past experiences either of the taxpayer or in the industry, with the asset in question. The consequent failure to recognize adequately the ever more important obsolescence factor resulting from our current technological revolution in business falls with particular severity on small business which in most cases lacks sufficient reserves or the means to obtain outside capital in order to modernize its plant and equipment. I understand also that there have been some problems with respect to salvage.

Effect On Business And Employment

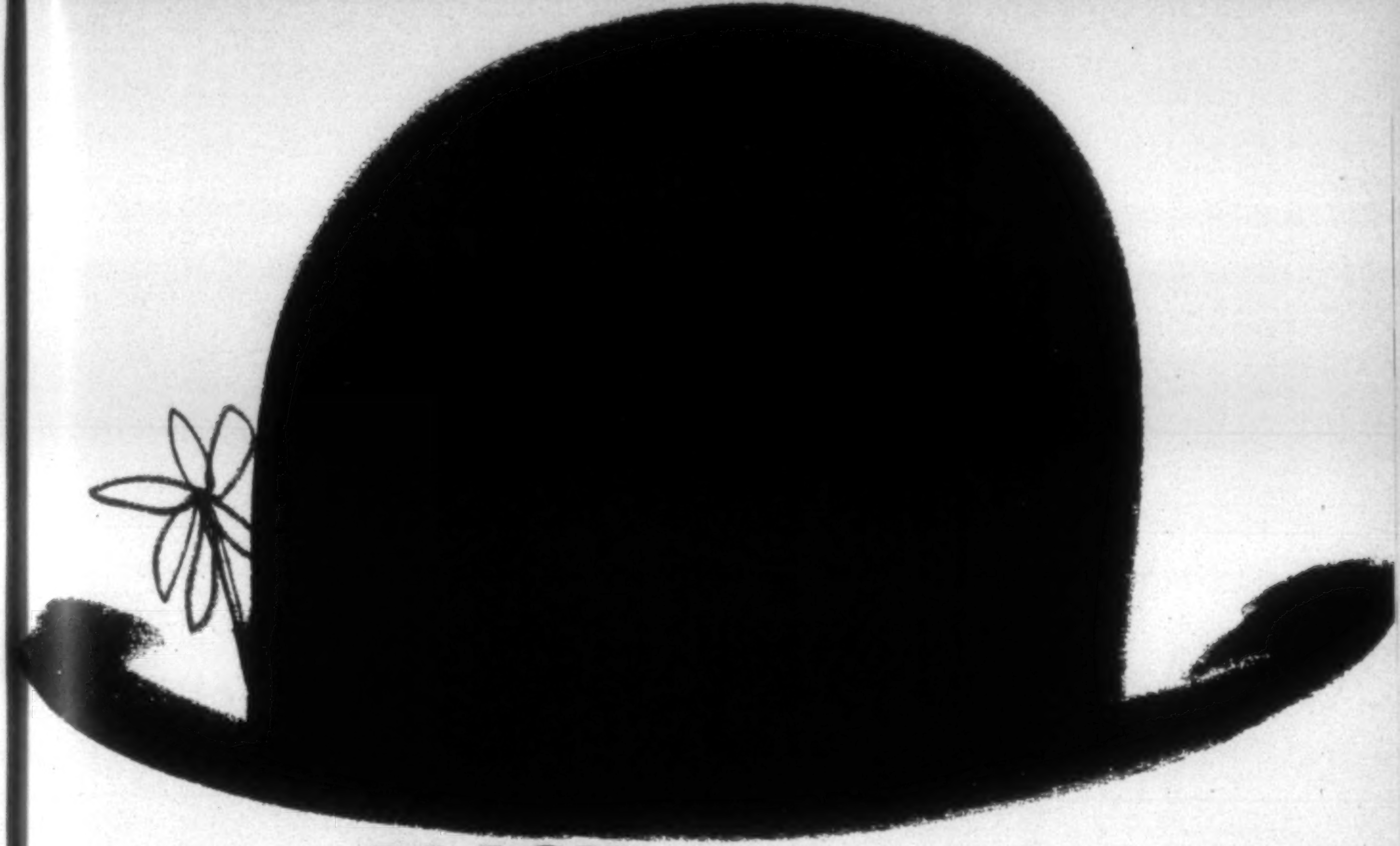
There is another aspect of this problem I believe should be further emphasized in reference to employment and wages. The present depressing influence of unrealistic depreciation policies inhibits, as conversely a more realistic depreciation policy would aid, the installation of more productive tools. These installations would allow greater efficiency of operation and more productivity per man-hour and thus higher wages. These installations would through lower costs make industry more competitive with imports and/or broaden the market for its products. This would increase employment. It is, therefore, important to realize that a realistic depreciation policy is as vital to employees as it is to business.

Summary

I believe the need for proper reform of our tax depreciation system is clear. If industry is to have the modern plant and equipment prerequisite to the growth of production, employment and standards of living in our country, it must be able to recover all cost of doing business—including depreciation—and have available to it an adequate source of funds. Whether the proper allowance for the underdepreciation from inflation and recognition of current and future rates of technological advancement should be attained through a change in the pattern of writeoff—for example, triple-declining-balance method; the extension of the initial small business writeoff through the elimination of the $10,000 limitation; the adoption of the class-rate approach with the proper rates as indicated previously; and/or the reinvestment depreciation approach I leave to the experts. I repeat, that action along these lines is indispensable to the optimum rate of growth of industry.

Material Handling Group To Meet

The Carolinas Chapter of the American Material Handling Society will meet September 18 at Enka, N. C., for a tour of the American Enka plant. The tour will begin at 1 p.m. At 6:30 p.m. a social hour will be held followed by dinner. The dinner program will include a short question and answer period about the tour and a presentation by a special speaker.



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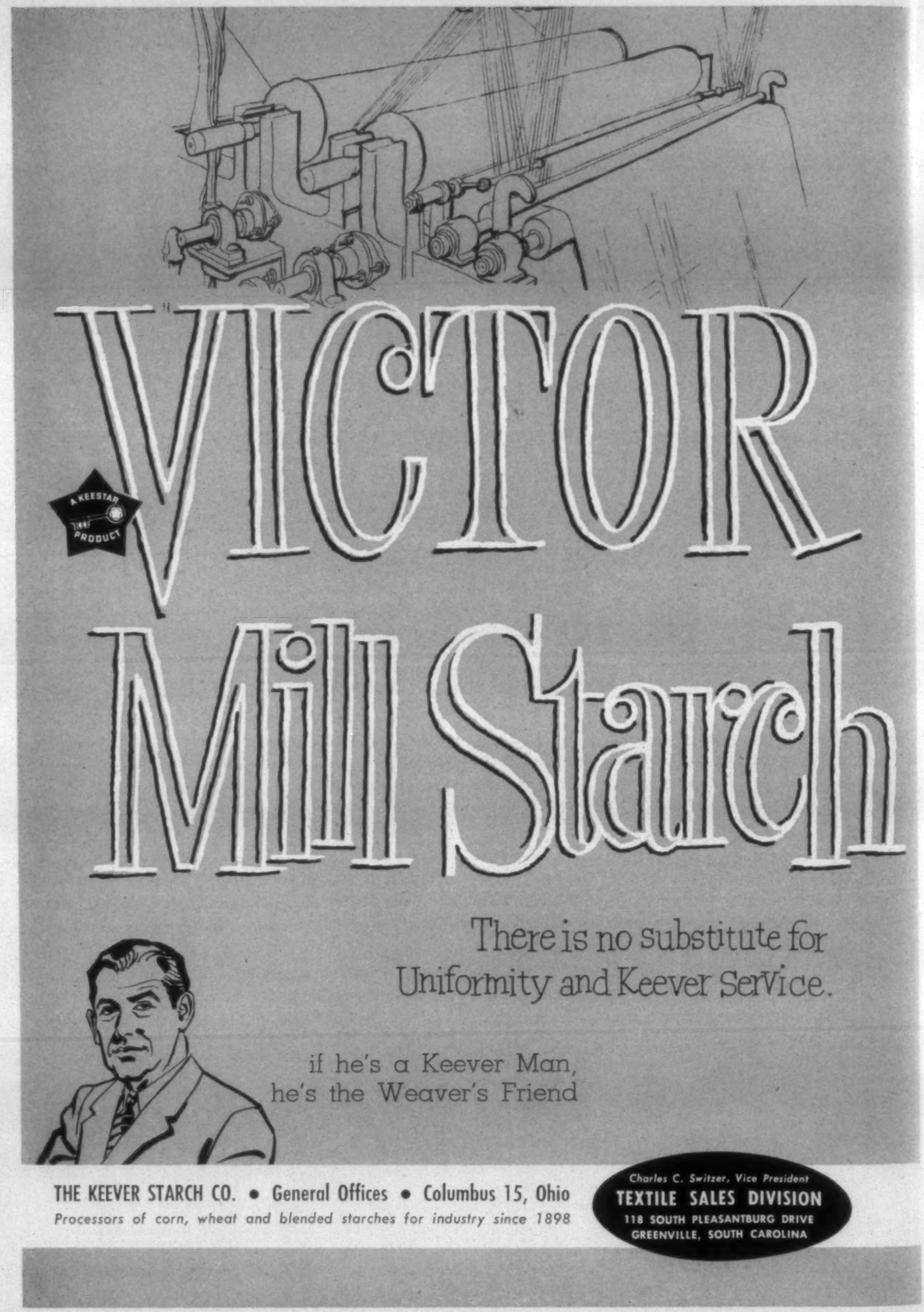

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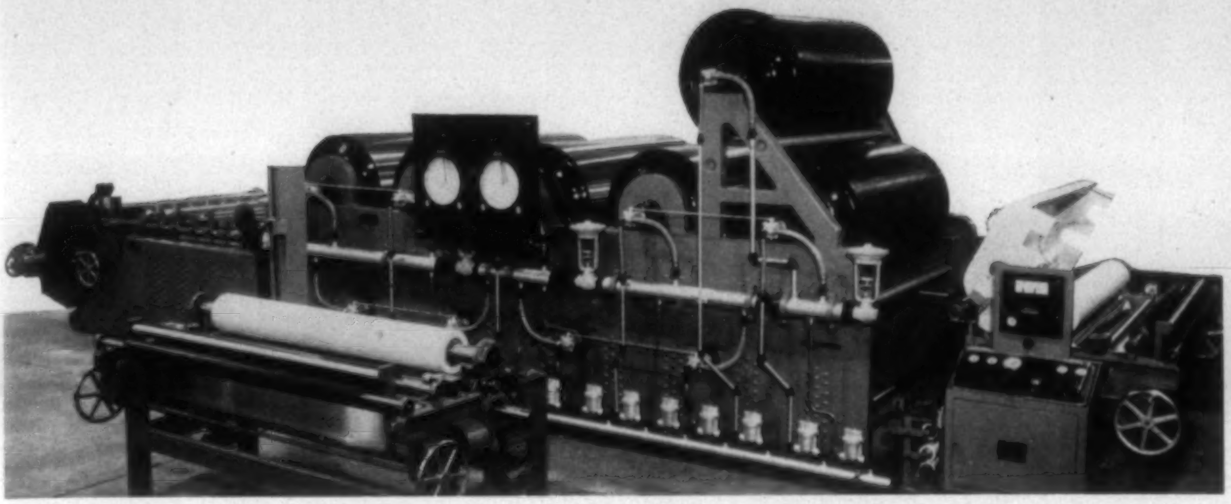


How Good Are Your Slashers?

By WILLIAM A. GRIFFIN, Ira L. Griffin & Sons, Charlotte, N. C.

Mills are giving more and more attention to their slasher rooms, and they are buying more and more of the improved slasher equipment on the market today. Our author here points out some of the advantages featured on the newer slashers and their components.

Over the years perhaps the most neglected department in textile weaving plants has been the slasher room. In many instances the slashing phase of textile manufacturing has been considered a necessary evil; non-productive; and a phase that should be performed as cheaply and as simply as possible and on machinery that very often is in such a poor state of repair that it is impossible to do work of acceptable standards. Not only have the slashers themselves been neglected but also the supplementary equipment such as instruments, size preparation and storage kettles and even procedures have been likewise neglected.

It is quite true that the slashing phase should be performed as cheaply and as simply as possible; however, as we all know, there is a limiting point beyond which economy and simplicity become waste and confusion. Let's take, for example, the mill running with an old slasher, no moisture control, no pressure controls on the cylinders, blanket covered squeeze rolls in the size box and a friction drive. This equipment was satisfactory 15 or 20 years ago and at that time was all that was available. It produced a warp that had various degrees of moisture left in it and which, also, had various percentages of size pick-up. There was a lack of uniformity in beam tension, a high percentage of broken ends and the yards per beam were 10% less than the beam could be expected to reasonably hold.

Now, to produce this type of warp today for today's quality market, while it is being done cheaply and simply in the slasher room, is adding greatly to the cost of weaving these warps and adding greatly to the percentage of seconds and is, without a doubt, adding two or three times more to the over-all cost of production than is being saved in the slasher room.

Is It Wise To Modernize?

Today's management, then, is faced with this question: "Shall I modernize my present slashers or shall I install new slashers?"

In this article, we would like to present the advantages and features of the new Textile Shops slasher and, for comparison purposes, to touch on modernizing old installations.

The Model FE 53-58000 Head End has many outstanding features, perhaps the most outstanding of which is the simultaneously expanding and contracting head and tailstock. To adjust for any size beam, the operator has only to turn a handwheel and the head and tailstock slide in or out. This eliminates the troublesome and annoying beam arbors which stick way out in the aisles on wide beams and which require inboard bearing stands on short beams. Also, this head end is equipped with pneumatically loaded nip rolls and compressor roll and has many other fine features. The frame itself is heavy duty cast iron and is designed for operation with a d.c. variable speed drive. All features have been designed for ease of operation including the lease rod holders which move backwards and forwards or up and down on one control knob.

Doffing time is greatly reduced also when using this head and because there are no arbors to be withdrawn. On one end, a pie shaped section is cut out of the dog plate and a simple latch holds the beam journals in place. On the opposite end, a split bearing housing and latch hold the beam journal. Operators report a much greater ease of doffing.

There is built on the frame an instrument cabinet which houses the controls and gages for the compressor roll and nip rolls and which also houses the counters for the stretch indicator. By merely throwing a toggle switch, the operator can instantly check his stretch. This will contribute greatly to better warps.

The multi-cylinder dryer is built on heavy duty cast iron side frames with any number of cylinders, 7, 9, 11 and 13 for single size box operation, to 8, 10, 12 and 14 for double box operation. The cylinders all bear A.S.M.E. Code Labels for operation at 50 psig. and are fully equipped with vacuum breakers, rotary steam joints, traps and any grouping the customer may desire for steam piping. Any number of cylinders may be teflon coated at customers option. The usual capacity of such a dryer, provided there is a good supply of steam, is approximately 160 pounds per hour per cylinder. To say that this is better than any other competitive drying unit would be untrue. Any cylinder on today's market has approximately equal drying capacity under equal conditions. Therefore, for a ten-cylinder dryer with maximum steam, a capacity of 1,600 pounds per hour could be expected.

The cylinders have reverse dished heads and stainless steel faces with a No. 4 finish. As optional equipment, indicating dial thermometers are installed in the head of each cylinder. This is a very excellent addition in that it will indicate possible troubles such as a malfunctioning siphon tube or steam trap.

In multiple size box operation, it is recommended that an even number of cylinders be used and in single box slashing it is recommended that an odd number of cylinders be used. The purpose of an even number when using two size boxes is to allow the split sheet to be partially dried separately before recombining for thorough drying. This greatly reduces the possibility of migration of size.

Griffin Size Applicator

The Griffin Size Applicator is an integral part of this new slasher. Originally placed on the market in 1953, the Size Applicator was accepted by the textile industry with much enthusiasm. It has since been modified and improved to an extent that the Model SA-1-57 is the finest machine of its type available on the market today. Approximately 400 are in use in this country and in foreign countries.

In the Model SA-1-57, the yarn is pulled from the creel in the dry state, thereby minimizing stretch. This is the only box on the market with this feature. The yarn is then carried in a relaxed condition by a positively driven combination immersion-squeeze roll through the first squeeze on to the size roll which delivers it to the second squeeze and at no time is there any unsupported yarn in the box. This means that ends cannot shift or roll resulting in better sized warps.

Another exclusive patented feature is the automatic pressure release on either or both squeeze rolls at creep speed. The pressure can be released entirely or to a predetermined lesser pressure to compensate for normally less pick-up at creep speeds.

Multiple Applicators

At this point, we would like to mention a subject that has been discussed often by operating personnel and about which there has been some misunderstanding. At any time the warp is heavier than 4,000 ends of 30s yarn, we recommend multiple applicators. While a single Griffin Size Applicator will size any number of ends and yarn counts better than any other size box, no single unit can give optimum results on heavy sets. So, for this reason, muliple units are recommended.

To be more specific, single-end sizing is, of course, the ultimate in a slashing operation. It follows, then, that in multiple-end sizing any particular thread should not touch an adjacent thread and, therefore, the ends should be as far apart as is possible. When adjacent ends touch, fibers from one become entangled with fibers from another and the threads are weakened when these fibers are torn apart at the lease rods. Also, shedding is increased. Thus, a good practical rule of thumb is to allow a space between each end equal to the diameter of the end and with this separation the danger of entangled fibers is minimized.

For illustration, let's take a size roll with a face of 60 inches and a warp from a creel 54 inches wide. This warp will "fan out" to about 56 inches in a size box. Now, this warp is composed of 30s yarn which has a diameter of .00700 inches. Dividing .00700 into 56, we get a figure of 8,000, or 8,000 ends could be laid side by side. Thus, to leave a space between ends equal to the yarn diameter, we see that 4,000 ends of 30s is maximum for best results. Similarly, the best number of ends per box may be computed for all yarn counts.

The above holds true for any size box and, therefore, when a size box manufacturer claims that a single unit of his machine with a 60-inch face will accommodate 6,000 or 7,000 ends of 30s, the fallacy of the claim is evident. True, this high number of ends can be sized in a single box, but not with optimum results.

Hoods for the dryers are fabricated according to a standard design which features rounded edges for ease of cleaning and the material used is 22-gauge, Type 304 stainless steel. Of course, other materials may be used at the customer's request. Sometimes, if the specifications are satisfactory, the customer's present fans may be reused in lieu of new fans. This can be dangerous, however, for if the customer's present fan is too small, it can retard drying.

All types of creels are available with this new slasher, depending upon customer's desires and upon the type of slashing to be done. Portable or magazine creels are available where space permits them, vertical creels where space dictates, filament creels and all other types for any size section beams.

Instrumentation by all manufacturers is available, and where possible the customer's old instruments may be reworked and reused.

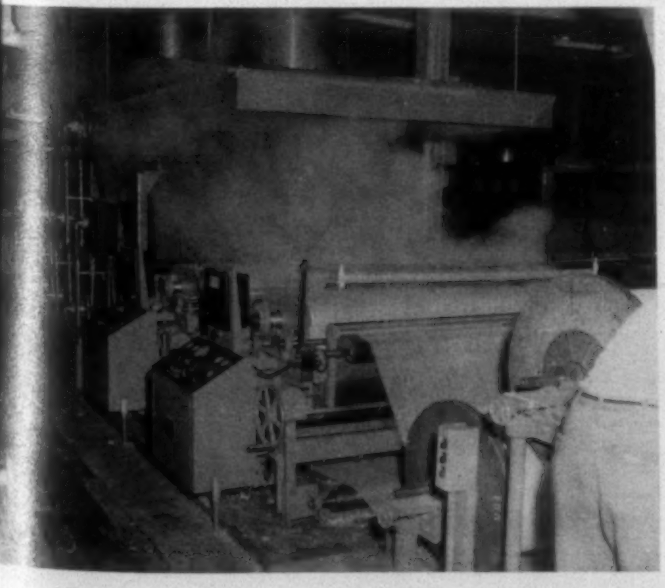
Now, to modernize an old slasher is sometimes the most economical and sensible thing to do. However, in some cases, modernization is about as costly as buying a completely new installation. For example, a mill has a three-cylinder dryer with copper faces on the cylinders, a friction drive, old size boxes without pneumatic loading on the squeeze rolls and an old front end. The dryer could be put in acceptable condition with rebuilt stainless steel cylinders, an electric drive could be installed, and new size applicators could be installed. It would seem, then, that the slasher would be in good condition. However, the front end probably wouldn't stand the increased speeds and a new front end would be required. With this addition, the cost would be so high that it might be more economical to install a completely new slasher. Each case, however, must be taken and studied on its own merits.

Spartan Mills Installs Three New Slashers

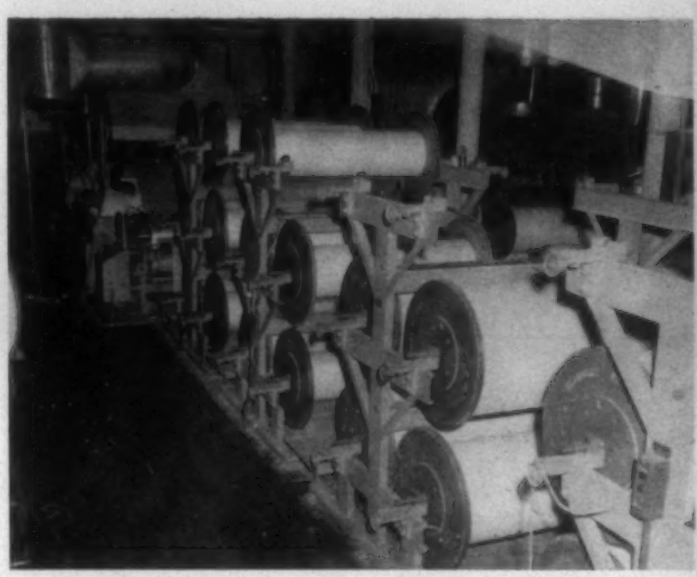
THREE modern slashers will replace five old ones in the new slasher room of the Beaumont Plant of Spartan Mills, Spartanburg, S. C. The new ten-cylinder slashers were built by The Textile Shops, Spartanburg, and have Ira L. Griffin & Sons' Size Applicators. About 1,450 looms weaving twills, drills, sheeting, tobacco cloth, bedford cords, sateens, etc., will be supplied with warps by the three slashers.

An average warp at the Beaumont Plant has 4,300 ends of 15s yarn. The new Textile Shops' slashers started up on these warps at a speed of 80 yards per minute. The mill expects to do somewhat better than this speed later on. The installation of the three new slashers will be completed this month. At the time of this writing, two of the new machines were in production.

The mill reports that the principal advantages of the new slashers are: (1) increased operating speeds; (2) more uniform size application; and (3) the ability to run heavier sets. Another advantage cited is the saving of from $8,000 to $10,000 per year in slasher blankets. The Griffin Size Applicator used by Beaumont has rubber-covered squeeze rolls. Slasher blanket cost is completely eliminated. Current plans call for buffing the rolls approximately every three months but this factor depends on the counts slashed and the buffing cycle may be revised.



When running light sets—less than 4,300 ends—only one of the Griffin Size Applicator's two size boxes is used. It should be noted that the hood exhaust fan was not running when this picture was taken.



This new innovation in section beam creels built by The Textile Shops is on trial in the Beaumont Plant's slasher room. The creel provides space for 30 30-inch section beams and allows a set to be placed in running position while the old set is still running.

Heavier sets can be run on the new slasher because of increased drying capacity—afforded by the ten 50-pound pressure cans—and the use of two size boxes. When light sets are run—less than 4,300 ends—only one size box is used. When heavy sets are run—up to 5,600 ends of 26s—both size boxes are used. Rubber rolls are reported to provide more uniform size pick-up. Penetration of size into the yarn is increased.

The sheets of yarn delivered from both size boxes remains separated until each has gone over one drying can. The sheets are joined on the third can.

The new slashers are run with 2% or less stretch in the yarn. Per cent stretch information is available at all times from instruments mounted on the slasher.

Starch handling and cooking was modernized some time ago at the Beaumont Plant. Starch is delivered to the mill in bulk form and stored in a silo. It is handled by a screw conveyor from the silo to the cookers in the slasher room. Cooking size is done automatically. The mill has a Norcross Corp. cooking system.

Section beams are handled with electrically operated chain hoists. Loom beams are doffed with hand operated chain hoists and are moved about on warp trucks after doffing.

The Beaumont Plant has a new Textile Shops' innovation in section beam creels on trial in its slasher room. The creel provided space for 30 30-inch section beams in an area little more than that required for conventional creels. Beams in a set are mounted vertically instead of horizontally.

Using the system, a new set can be placed in running position while the old set is still running. Three ten-beam sets can be mounted at a time. Beam journals run in ball bearings. The creels are loaded with electric chain hoists.

Monarch Mills Installs Two New Slashers

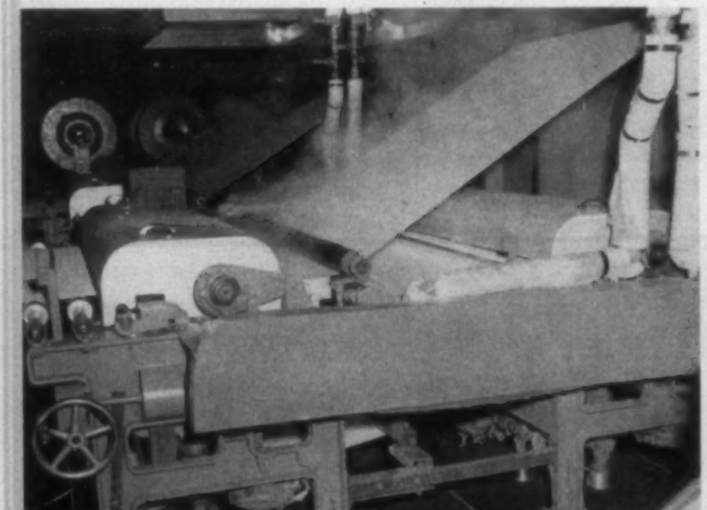
TWO new slashers built by The Textile Shops have recently been installed at the Monarch Plant of Monarch Mills, Union, S. C. Both of the new slashers have Griffin Size Applicators. The slashers have ten 30-inch diameter, 50-pound steam pressure drying cylinders.

The mill reports the slashers are operating satisfactorily at high speeds. The new slasher runs light styles at speeds approximately 30% greater than those of conventional three-cylinder slashers. These light styles are made of 2,500 to 4,000 ends of 32s warp yarn. On heavy styles, 4,000 to 6,000 ends of 26s warp yarn, the new slashers run at speeds 30 to 40% greater than conventional slashers.

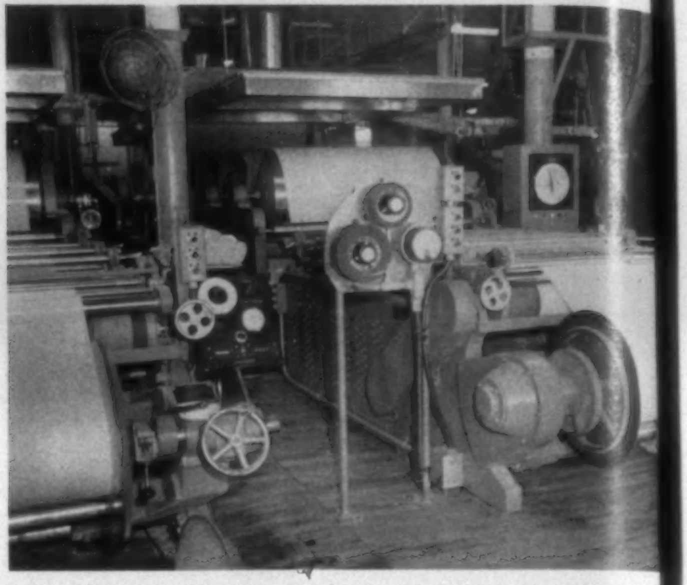
Advantages Cited

Advantages cited by Monarch for the new slashers include:

(1) Better hooding. Only one hood is used for both the drying section and size applicator. On conventional slashers run by the company, two hoods are necessary. The one hood on the new slasher does a more efficient job of removing heat and moisture laden air. Monarch men aided The Textile Shops in the design of the hood.



The Griffin Size Applicator is standard equipment on the Textile Shops' slasher.



Better hooding, increased drying capacity, reduced size migration, easier cleaning, quicker doffing, easier split rod adjustment, and better control features are given by Monarch Mills as advantages of the newly installed Textile Shops' slasher.

(2) More drying capacity. Greater drying capacity is due not only to the increased drying surface of the ten cans but also to the fact that the smaller cans are operated with 50 pounds of steam pressure. The company's conventional slashers have 15 pounds pressure capacity.

(3) Size migration reduction. The migration of size is reduced in the new slasher partly because the sheet of yarn is split as it is delivered from the size applicator. Half the yarn goes over one drying cylinder and the other half goes to another. Another reason for migration reduction is the same as previously given for increased penetration. In any slasher, if migration is reduced, greater size penetration is a direct result.

(4) Easier cleaning. The hood position and shape, and the location of the ten drying cylinders allows the cylinders to be cleaned much easier than conventional slasher cylinders.

(5) Quicker doffing. A special feature of the new slasher permits faster doffing. Full beams are doffed and empty ones put on the slasher in approximately one-third less time than required on conventional slashers.

(6) Split rod adjustment. The Textile Shops' slasher has an easy adjustment for lease and bust rod stands. The rods can be positioned without the use of wrenches as necessary on conventional slashers. Large diameter lease and bust rods are used to split ends farther back. This prevents the ends from running under the rods at high slashing speeds.

(7) Better control features. Improved control over the pneumatically operated press and nip rolls make more uniform size application and beam winding possible. Yardage counters mounted on the control board located at the delivery end of the new slasher indicate the amount of stretch put in the yarn. The problems associated with control of stretch are greatly simplified by the device.

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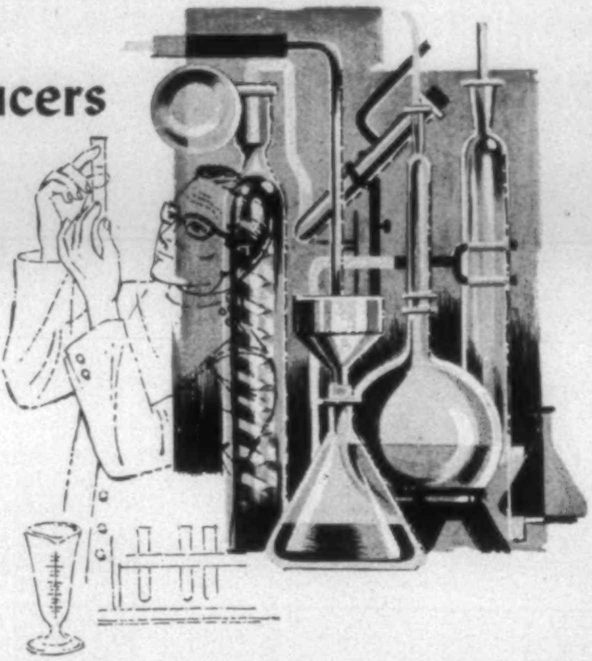

[To be completely accurate: These mills have installed a total of 8 competitive warpers for comparative purposes . . . against a total of 205 Cocker Warpers.]

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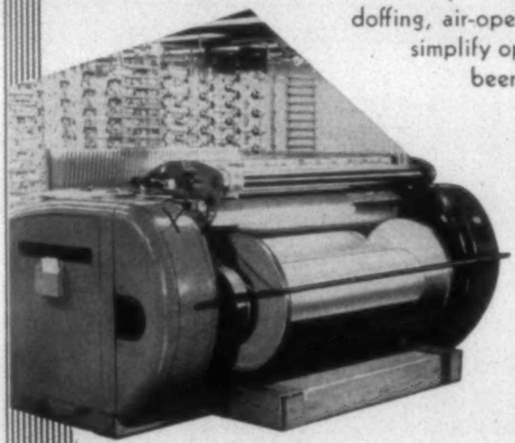

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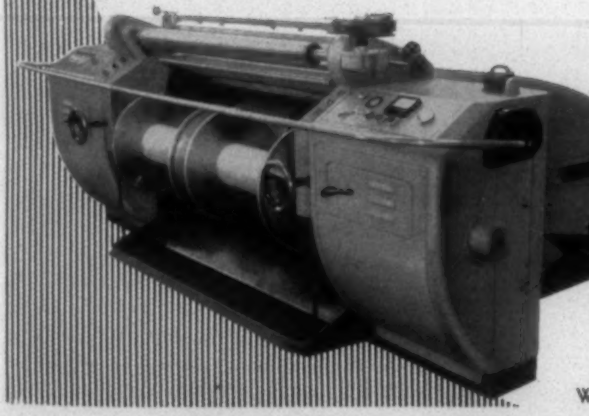

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a study group of the U.S.D.A. Foreign Agricultural Service reports on

Cotton in the Soviet Union

THE Foreign Agricultural Service of the U. S. Department of Agriculture has published a report of its technical study group which spent 32 days in Russia studying that country's cotton production. The tour resulted from the agreement concluded between the U.S.S.R. and the U. S. last year providing for exchanges in the cultural, technical and educational fields.

The report, entitled "Cotton in the Soviet Union," said that cotton growing is so heavy in central Asia that it resembles the one-crop system existent in the U. S. Cotton Belt 30 years ago. Plenty of new land is said to be available for the planned increase of 1.2 million acres by 1965. In 1958, an estimated 5.2 million acres was being used for the production of cotton. Most of the land used for cotton lies between latitudes 38° to 42° (Louisville, Ky., to Chicago, Ill.) and is in a near sea level desert basin.

During the harvest period mounds of seed cotton, about 400 tons each, are built up at the gins. The mounds are then covered with tarpaulins. They are gradually passed through the gins during the next nine or ten months. Further protection is not needed since annual rainfall totals three to six inches.

The gins operate with machinery about like that in the U. S. in the 1930's. They are in operation nearly all year. All presses pack cotton at high density of about 32 pounds per cubic foot. Samples are taken before pressing, so bale covers are never cut for sampling.

Medium Quality Cloth

The report says that U.S.S.R. cotton mills are producing mostly cloth of medium quality in attractive colors but with a relatively narrow range of colors and patterns. Prices of cotton goods and wearing apparel are high in relation to wages and in effect provide an indirect system of rationing.

In September and October of 1958 a six-man technical study group from the U. S. toured the cotton producing areas of Soviet Russia. Included were: Charles H. Barber, economist, Foreign Agricultural Service; Billy M. Waddle, plant breeder, Agricultural Research Service; Edward J. Overby, director of cotton marketing, Agricultural Marketing Service; William J. Martin, utilization specialist, Extension Service; Victor L. Stedronsky, ginning engineer, Agricultural Research Service; and Leonard A. Mobley, economist, National Cotton Council. Here is an abstract from the group's report.

Since the Soviet Union has a population of over 200 million and suffers from limited supplies of other natural fibers and an almost total lack of synthetic fibers, the planned two-million-bale increase could easily be absorbed by the consumers. Whether or not this will happen depends, of course, on government policy.

The study points out that the workers are paid partly in grain and partly in cash, with the total based on the number of work-day units. The rate of pay for work-day units differs with the job. Not much cash gets into the hands of farm workers through this channel.

Cotton production in the U.S.S.R. has doubled over the past ten years and in 1958-59 was estimated at 7.0 million bales. This was accomplished by increasing acreage from 4.1 million acres in 1948-49 to 5.15 millions in 1958-59 and by increasing the average yield per acre from 398 to 652 pounds.

Vast Potential

The group reported that aerial observation during plane flights would indicate that there are tens of thousands of acres of desert land that can be leveled and adapted to irrigation agriculture.

Nearly all the cotton in the republic of Uzbekistan is of the American upland type. The yield estimate of 23.1 centners per hectare of seed cotton (about 700 pounds of lint per acre) for this area for the year would appear to be fairly accurate. The report said there was considerable two-bale-per-acre cotton and occasionally even better yields were indicated. The appearance of this cotton indicated to the study group that an adequate fertilizer program is being followed. Almost no evidence of nutrient deficiency was seen.

The fields in Uzbekistan were said to be fairly clean. Considerable claim is made by the Russians for the merits of check-row planting and cross cultivation. This method is possible only when the plants are small and it hinders the even flow of irrigation water. The common weeds observed were Johnson grass, pigweed, bindweed and Bermuda grass. The greatest potential problem for cotton production in the area is the threat of widespread verticillium wilt damage. There is also some fusarium wilt.

With its almost unlimited water supply, large areas of land that can be reclaimed, surplus labor force and good ambitious farm management, Uzbekistan has great potential for the production of cotton.

The republic of Tadzhikistan is one of the major producing areas of extra-long staple cotton in the U.S.S.R. The report says that the yields of this type of cotton are generally good and near the one-bale-per-acre yield level. The plant type of the long staple varieties was said to be very poor as judged by Pima S-1 standards. Its fruiting habit was of the cluster type. Bolls were reported to be small with the plants weak stemmed and very leafy. The bvious seed mixtures in all fields were striking. A leaf pot disease identified as macrosporium was common to nost fields observed. The impression of the American roup, however, was that this was cercospora leaf spot. he gins observed were of the saw type and were being sed to gin long staple cotton as well as the upland type. he report says that considerable damage was being done o the longer staple fiber. The insect damage in Tadzhi-istan, as well as in Uzbekistan, is caused by bollworms, pider mites, aphids and cutworms.

The cotton producing area of Azerbaydzhan lies in a road valley between the Little and Great Caucasus Moun-ain ranges. The plant type of the cotton grown in this rea is not of the semi-cluster nature observed in the other epublics but is of a more open type and not as high yield-ing. Insect problems are apparently serious. In 1958 there was a heavy infestation of cotton bollworm. One field had en applications of calcium arsenate—still the loss was estimated at 25% of the crop. Other fields had heavy spider nite attacks.

The yields in Azerbaydzhan were somewhat lower than those in Uzbekistan and Tadzhikistan. Grades were lower because of weathering damage. Irrigation water is plentiful in this area. Rainfall totals 10 to 15 inches annually. The climate here seems to be better suited to other crops.

Research work being done at the field stations visited by the group was reported to be of very good quality in general. The emphasis is on applied rather than fundamental research. Discussions with the leaders at the Plant Breeding Research Institute and the Plant Protection Institute in Leningrad resulted in the feeling that the leaders in plant research are of the highest character, the group reported.

Quality Evaluation

The system of quality evaluation of cotton and the basis for transactions between farmers, ginners and mills was said to be the most difficult subject on which to get information. Cotton is evaluated at the gin and this evaluation generally stays with it to its final destination. Each ginnery has a fiber evaluation laboratory with instruments for determining the strength and grade of the ginned lint. Any dispute between the mill and the ginner is settled by arbitration through a state inspector.

Sorting for uniformity begins with the picking. Cotton produced in an area is generally of one variety and thus

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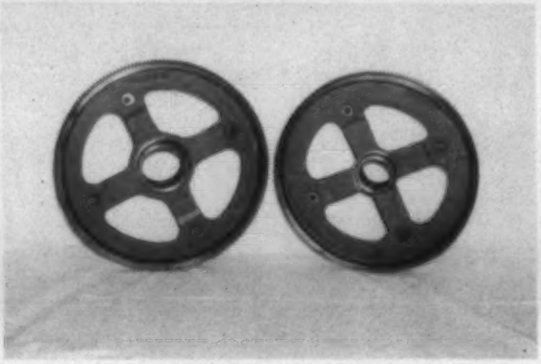

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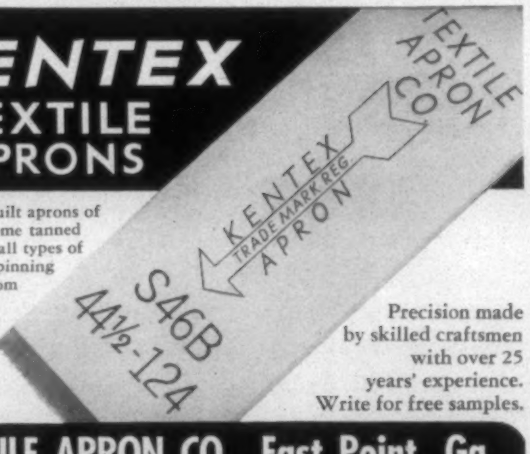

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quite uniform in basic properties. From the fields cotton is sacked by "sorts" and is taken to a procurement center in the gin's territory. At the centers cotton is spread out in thin layers on a concrete, adobe or macadam yard. It is left in the sun for several hours. During this time laborers constantly rake or fork it. While this process may be detrimental to the staple, the report states, it tends to improve grade and results in a blended uniformity of cotton going to the gin.

When the cotton reaches the gin it is piled in great stacks some 40 to 50 feet long and 25 feet wide. Conveyors build the stacks to 25 feet high. These piles usually contain about 400 to 500 tons of seed cotton. The cotton is stacked on raised rock or concrete platforms. Provision is made for ventilating the stacks if necessary to prevent heating. Under this system, the ginning season is extended to cover nine to ten months of the year. The cotton has a great deal of uniformity, the study reported, resulting from the way it is grown and handled.

Hand Picked Cotton

Most of the cotton is carefully hand picked but machine pickers are used for late-season harvesting. Before being taken to the procurement areas the seed cotton is spread out at the end of cotton rows and on highways and other prepared open areas and is stirred with pitchforks for four or five hours.

According to Gosplan, the U.S.S.R. State Planning Commission, there are approximately 120 ginning plants in the U.S.S.R. with an average of five gin stands per plant. Apparently, the study reports, there are just enough ginning facilities to gin the crop by operating on a year-round basis.

The pressing and packaging operations at the gins are said to be good. The presses are capable of pressing the bale to a density of about 32 pounds per cubic foot. The package is neat and is not mutilated by sampling. Generally 10-wire ties of approximately $\frac{5}{32}$-inch diameter were used instead of bands for tying out the bales. Cotton bagging is commonly used for bale coverings, although some of the gins use hessian cloth. The bales are completely covered and the heads are sewed. The delinting of seed is a part of the ginning operation rather than the oil mill process.

The textile industry in Russia does not come within the province of the Ministry of Agriculture but the U.S.S.R. State Planning Commission, commonly called Gosplan. The industry relies primarily on natural fibers. Cotton makes up nearly 70% of textile raw materials. Flax wool, man-made fiber and silk make up the remainder. In 1958 spinning mills consumed about 5.2 million bales of cotton. Production of fabrics from the apparel-type fiber or yarn amounted to 7.81 billion yards in 1957. Cotton accounted for 78.7% of the cloth; wool, 4%; linen, 6%; man-made fiber, 6.5%; and silk, 4.8%. The cotton textile industry is believed to be operating below capacity.

Emphasis On Production

Since there is an absence of economic competition in the U.S.S.R., the emphasis is on production volume rather than on quality. Mills are somewhat concerned about the quality of the raw cotton they get but they have to use what is furnished and turn out the best product possible. There is much talk in Russia about the future and about becoming the No. 1 cotton textile nation by 1965. This prospect can be better evaluated when the 1965 plan is published.

D.M.R.C. Forms Belfast Division

George Cocoros

A separate division for Belfast self-ironing fabrics has been established by Deering Milliken Research Corp., Spartanburg, S. C., according to Russell B. Newton, president. Growing activity in all phases of the Belfast fabrics program has made the formation of the division necessary, Newton reported.

A new division will be headed by George Cocoros, former head of product development for D.M.R.C. Cocoros said his division plans to launch immediately a large--scale program of trade and consumer advertising, merchandising and sales promotion as well as expanded programs in research and other fields. Belfast self-ironing fabrics have been on the retail market since the Fall of 1958.

'59 Cotton Crop Expected 29% More Than '58

The U. S. Department of Agriculture has forecast that the 1959-60 cotton crop will be 14,815,000 bales, some 29% greater than the previous year. A record high yield of 474 pounds per acre was also forecast.

The average crop from 1948 through 1957 amounted to 14 million bales annually. The 1959-60 estimates are some 5% greater than this average. The record high yield per acre compares with last year's 466 pounds per acre which was the previous high. The 1948-57 average yield per acre is 329 pounds.

The U.S.D.A. forecasts more than two bales an acre yields for California and Arizona, with 1,086 and 1,011 pounds, respectively. Production of more than a bale an acre was forecast for: New Mexico, 800 pounds; Missouri, 558 pounds; Arkansas, 524 pounds; Tennessee, 522 pounds; and Mississippi, 505 pounds.

Fiber Society Announces Fall Program

A two-day program featuring a special report on the textile industry in India, delivery of seven technical papers and election of new officers is scheduled for The Fiber Society's Fall meeting at Princeton, N. J., September 10-11. Sessions will be held at the Textile Research Institute.

The report on Indian textiles will be presented in a banquet address September 10 by Dr. Helmut Wakeham, Philip Morris Inc., New York City.

Technical papers scheduled for delivery September 10 include "Dynamics of Textile Materials," by D. R. Petterson, G. M. Stewart and F. A. O'Dell of the Army Chemical Center, Md.; "The Failure of Strong Fibers Under Repeated Loading," by J. L. Riley and W. George, Celanese Corp. of America, Summit, N. J.; and "Effects of Drawing and Skin: Core Ratio on Properties of Viscose Rayon Filaments," by J. H. Dusenbury, C. Danziger and E. Dey of the Textile Research Institute.

Papets presented on September 11 will be "The Physical State of Direct Dyes in Viscose and Its Influence on Light Fastness," by L. Weissbein and G. E. Coven, American

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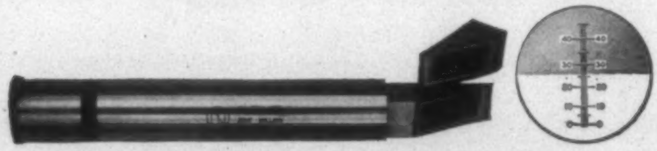

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Cyanamid Co., Bound Brook, N. J.; "Modification of Fibers by Grafting," by E. H. Immergut, Dunlop Research Center, Toronto, Canada; "Lubrication of Fibers and Drafting Properties of Roving," by G. H. Lourigan and D. M. Cates, North Carolina State College, Raleigh; and "Heat Transmission Through Fibrous Cotton Slabs," by H. J. Janssen and R. V. Bailey, Southern Regional Research Laboratory, New Orleans, La.

Chemical Market Research Meeting Sept. 20-22

"Textile Fibers—Yesterday And Tomorrow" will be the theme of the Chemical Market Research Association Conference to be held September 20-22 at the Williamsburg Inn and Lodge, Williamsburg, Va. The conference will hear an analysis of present markets for textile fibers, forecasts of future markets and expert discussion of the special marketing and market research techniques required by the new fibers.

Speakers at the technical session on September 21 will be: John L. Martin, The Du Pont Co., "Review And Forecast Of Textile Fibers Markets"; E. T. Powers, Chemstrand Corp., "Market Research On A New Textile Fiber"; and R. L. Churchill, Eastman Chemical Products, "Marketing A New Synthetic Textile Fiber." A panel discussion on September 22 will consider "New Fiber Market Spectrum—Polyamides, Acrylics, Polyesters." The panel will consist of J. B. Goldberg, consultant; Paul Runge, The Chemstrand Corp.; Amos Ruddick, Dow Chemical Co.; and James O. Graves, The Du Pont Co.

Combed Yarn Spinners To Meet Sept. 17-18

The 34th annual convention of the Combed Yarn Spinners Association will be held at Sea Island, Ga., September 17-18. This meeting will mark the third consecutive year the association has met at the Georgia resort.

Business sessions will feature D. H. Fincher, Southern Bell Telephone & Telegraph Co., speaking on "Top Management Development"; and Granville Alley Jr. of a Miami and Tampa, Fla., law firm, speaking on "Good Industrial Labor Relations." The after-dinner speaker will be "Sunshine Gene" Flack, sales counsel and director of advertising of the Sunshine Biscuit Co.

A.S.Q.C. Schedules Textile Division Meeting

The American Society for Quality Control's Textile Division will hold its tenth annual conference at The Clemson House, Clemson, S. C., February 18-19, 1960. Robert G. Mitchell, International Latex Corp., Dover, Del., has announced a more varied than usual program is being planned for the tenth anniversary meeting. The program will give emphasis to discussion groups on practical process control as well as educational and technical control papers.

Wool Consumption Down In June

The weekly average rate of fiber consumption on the woolen and worsted systems in June totalled 73,571 thousand pounds, 8% below the May rate but 16% above that of June 1958, according to thte U. S. Department of Commerce. The weekly average raw wool consumption during June was 8,234 thousand pounds (scoured basis) or 8% below the May level, but 32% above that of June 1958.

Consumption of apparel class wool at 27,020 thousand pounds was 5% below the May rate but 16% above that of June last year. Carpet wool consumption at 14,148 thousand pounds was 12% below that of May but 77% above the June 1958 rate.

Consumption of fibers other than raw wool averaged 6,180 thousand pounds per week, or 10% below the May average but 1% above June 1958.

Carpet wool stocks in the U. S. on July 1 amounted to 5 .8 million pounds (scoured basis).

Unions Strike Japanese Textile Mills

Some 245,000 Japanese textile workers belonging to 131 unions went on strike against various mills August 10. Officials of the League of All-Japan Textile Workers Unions reported the walk-out was the largest unified strike of textile workers since the end of World War II.

The unions are said to be demanding wage hikes of about $6 per month from the present average of about $40. A spokesman for the Japan Cotton Spinners Association stated that such a wage hike would increase production costs of Japanese cotton yarns and fabrics 2 to 3% and managements of cotton spinning companies were not in a position to accept the union demands in view of export competition.

When the strike began, the cotton workers were slated to strike two days starting August 10 and again for an indefinite period starting August 17. Rayon workers went on strike for an indefinite period starting August 10.

June Textile Imports Up Over Last Year

Imports of cotton increased to 16,600,000 square yards in June 1959 as compared with the June 1958 total of 13,609,000 square yards. During June this year importations were valued at $3.6 million. Last year's June imports of cotton cloth was valued at $3.4 million. Some 16,370,000 yards of cotton cloth valued at $3.8 million was imported into the U. S. in May 1959.

Burlap imports in June amounted to 56,195,000 pounds, valued at $8.6 million. This contrasted with year-earlier imports of 30,315,000 pounds valued at $4.5 million and month earlier imports of 52,628,000 pounds valued at $8.1 million. June imports of wool manufactures totaled $16 million against $13.1 million a year ago and $18.4 million in May.

A.A.T.C.C. To Discuss Nonwovens

The Southeastern Section of the American Association of Textile Chemists & Colorists will hold a symposium on nonwoven fabrics at its meeting September 12 at Ida Cason Callaway Gardens, Pine Mountain, Ga. Frederick F. Hand of Callaway Mills Co.'s plant in LaGrange will act as master of ceremonies.

E. L. Clements, sales engineer, nonwoven fabrics, Celanese Corp. of America, Charlotte, will discuss "Styling and Decorating Acetate Nonwovens." H. W. Coates and C. E. Layman, both of Celanese Fibers Co., will present a paper covering "Solvent Dyeing of Acetate Nonwovens"; Acetate Silk Screening and Machine Printing Process"; "Technique for Securing Three-Dimensional Effects"; "Plasticizer, Dye and Acetate Fiber Combinations"; and "Acetate Fiber Combinations." D. V. Probasco, formerly sales manager of nonwoven fabrics for Wellington Sears Co., New York City, will discuss the steps to be taken to develop a nonwoven fabric for a particular product. "Areas for Nonwoven Fab-

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rics Advancement" will be discussed by Paul A. Homier, superintendent of the Callon plant of Callaway Mills, La-Grange, Ga. D. C. Nicely, group leader in the nonwoven fabrics group of The Chemstrand Corp., Decatur, Ala., will discuss "Properties of Acrilan Nonwoven Fabrics as a Function of Binder and Binder Content." R. B. Hallowell, Coats & Clark Inc., Albany, Ga., and chairman of the section, will preside.

A.G.A. Symposium Slated For Sept. 28-29

The American Gas Association will hold its 3rd annual Textile Processing Symposium September 28-29 at the Sedgefield Inn, Greensboro, N. C. Theme for the program is "Pinpointing Performance." Speakers and subjects are: "Fiberglas," H. M. Rogers, Lockwood Greene Engineers; "Nonwoven Fabrics," Herman B. Riehl, Proctor & Schwartz; "Textile Air Conditioning," Ernest C. Hungate, Carrier Corp.; "Machinery For The Textile Industry," Walter W. Sibson, Proctor & Schwartz; "Foreign Competition," Walter H. Hindle, Air Reduction Co.; "The Application Processes for Textile Resins," Q. M. Rhodes, American Cyanamid Co.; "Heat at the Point of Use," William H. Oler, Hauck Mfg. Co.; "Maintenance Of Gas Fired Equipment," E. J. Skerkoske, Eclipse Fuel Engineering Co.; "Radiant Heat Applications," Edwin S. Mack, manufacturer's agent; "Installation of Consumer Owned Gas Piping and Gas Equipment," C. Geotge Segeler, A.G.A.; and "Textile Education and Research at Clemson College," T. D. Efland, Clemson College.

A BEAUTY IN LURVEL—Cone Mills Corp., Greensboro, N. C., is duly proud of this year's North Carolina entrant in the Miss America contest, especially when she gets all dolled up in the formal shown here. Made of Cone's white Lurvel, a velvety cotton fabric, the gown was especially designed for Judith Lynn Klipfel, the North Carolina queen, by designer Luther Winborne Self. The fabric was woven at Cone's Haynes Plant at Avondale, N. C., and finished at the Granite Plant, Haw River, N. C. It is part of an extensive wardrobe recently presented by Cone to Miss Klipfel at the Greensboro Country Club.

British Textile Industry To Exhibit Here

What is said to be the biggest and most complete display of the British textile industry ever shown in the U. S. will be part of a 17-day British exhibition of industry, technology, science and culture in the New York Coliseum, June 10-26, 1960. The event is being sponsored by the Federation of British Industries with the backing and support of the British government.

D. A. Lamb, general manager of the exhibition, said the displays will show "all that is best and most advanced in British industrial products, both consumer and capital goods."

He said that the textile industry will have one of the most extensive displays with leading firms in the fields showing their finest wool, cotton, linen and other fabrics.

September Is "Woolen Month"

Plans have been laid for the national observance of American Woolen Month in September, according to Woolens and Worsteds of America Inc. Emphasis in the promotion will be placed on the style, quality and value of American-made wool products, as well as the industry's importance to the national economy.

Initiated last September, it is expected American Woolen Month will garner considerable national recognition this year. Proclamations by governors of more than 43 states and mayors of leading cities will mark the event which has received the endorsement of important wool trade associations, fashion and apparel groups, resident buying offices, manufacturers and retailers. All methods and media will be used to publicize the event.

At the consumer level, retail store promotions will be encouraged across the nation. This will call for window and departmental displays of American-made wool merchandise with identification of "American Woolen Month" on colorful red, white and blue display cards. Fashion showings of American-made woolens for the entire family will be arranged. Sheep shearing demonstrations are planned for a selected number of stores throughout the country. A descriptive talk will be given by an industry spokesman on the processing and manufacture of the fleece into cloth, during these demonstrations. Promotional kits containing pertinent information on the American woolen industry and suggesting special promotions, local tie-ins, displays, etc., will be sent to retailers, buying offices, home economics departments and others. Newspapers, syndicates, wire services, television, radio and various other consumer media will be utilized to disseminate information about American-made wool and wool textiles.

At the trade level, information will be distributed to all segments of the wool industry. The colorful American Woolen Month posters will be sent to mills, sales agents and manufacturers for showroom and window displays. These will also be exhibited in the lobbies and elevators of office buildings where there is a concentration of businesses related to the wool manufacturing industry. Again the huge banner proclaiming "September is American Woolen Month" will span Seventh Avenue, the heart of the garment manufacturing industry in New York City, for the entire month. Because the Fall markets open during this

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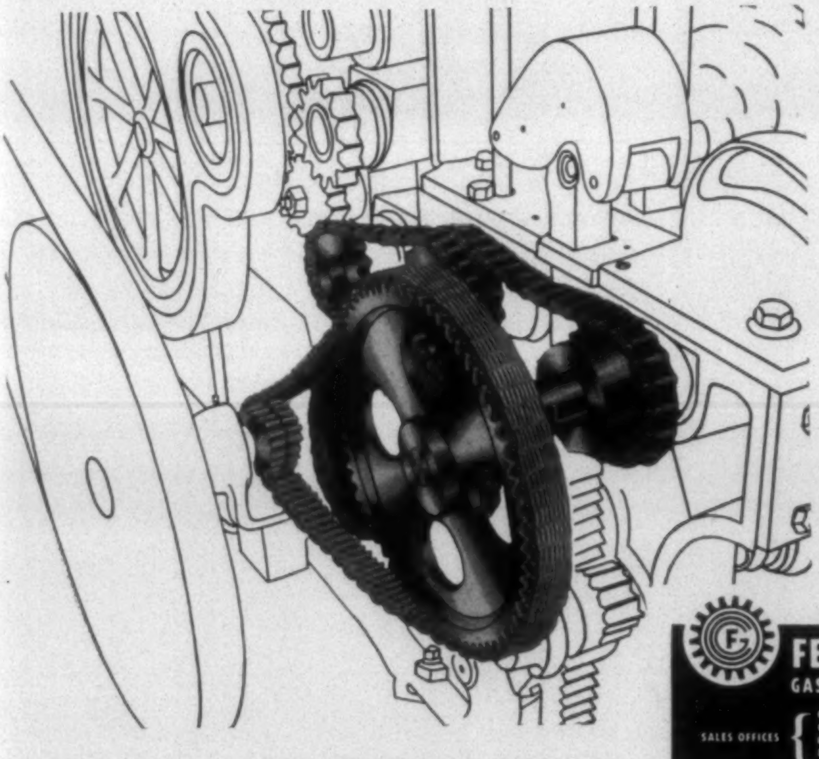

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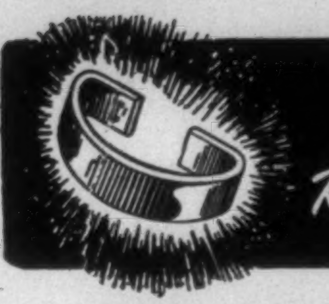

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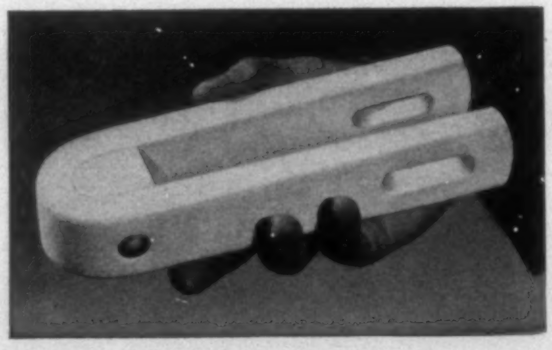

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period, it is estimated millions of people including manufacturers, buyers and retailers from all parts of the nation, as well as consumers will view this banner.

Treasury $12½ Billion In Red This Year

The Treasury Department has announced an estimated deficit for fiscal 1959 at $12½ billion. The amount of the deficit is a peacetime peak but some $330 million under President Eisenhower's estimate made last January. Estimates of receipts were set at $68,158,000,000 while expenditures were estimated at $80,699,000,000.

In January 1958, President Eisenhower had forecast a $500 million surplus with expenditures for fiscal 1959 of $73.9 billion and receipts of $74.4 billion. However, the 1957-1958 recession bit into income and corporation tax revenue and Government spending rose to counter the depressed conditions.

Imports From Spain Ordered Halted

A New York City clothing manufacturer has been ordered to cease and desist from importing articles of clothing from Spain for sale in the U. S. by the New York Clothing Manufacturers Exchange. The decision of the case held that a contract agreement with the Amalgamated Clothing Workers of America has been broken by the importation of goods from a foreign country for sale in the U. S. The case involved suits, raincoats and other articles of apparel.

The case was significant because it was a test case. Although the A.C.W. had no comment on the decision, it has been reported that the union would proceed to crack down on other clothing manufacturers who have been importing clothing.

One of the provisions of the Exchange-A.W.C. pact states: "During the term of this agreement the employer may with the consent of the union manufacture garments or cause them to be manufactured in a factory other than his present factory or factories provided his present factory or factories have full employment and provided further that such other factory or factories are under contract with the union."

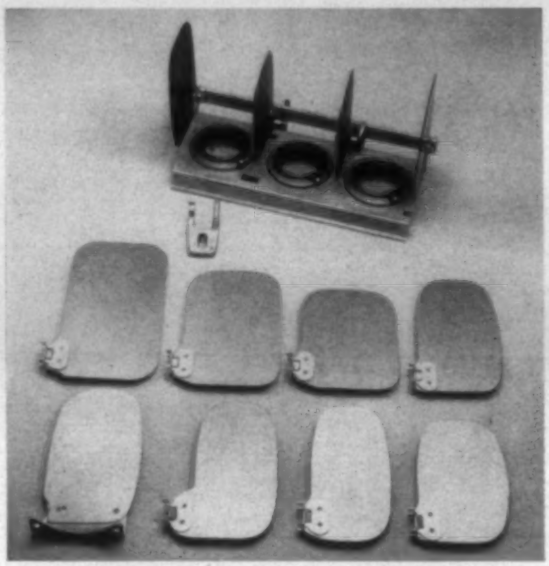
What Do You Know About Patents?

(Continued From Page 42)

periodicals. The copyright grants the "author" the right to prevent others from copying his works.

The Fire Of Genius

The present system has contributed to the growth of both large and small companies in the textile industry and is the key to continuing research because it alone offers protection for the inventor's investment of time, effort and money. The constant search to improve the quality of its products and to develop new ones better suited to its customers' needs is basic to the growth and prosperity of a company. By its very nature, research is a gamble and in exploring the unknown, one must follow trails that lead to dead ends in order to be certain not to miss the path that leads to the goal. In the words of Abraham Lincoln, "The Patent System added the fuel of interest to the fire of genius."



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PERSONAL NEWS

Oliver D. Landis

Oliver D. Landis, president of Oliver D. Landis Inc., Gastonia, N. C., is departing from New York September 3 on a 30-day business tour of Great Britain and Europe. Accompanied by Mrs. Landis, he will visit Paris, Rome, Florence, Milano, Vienna, Munich, Zurich, Copenhagen, London and Scotland. He will spend four days at the Third International Textile Exhibition at Milan, Italy. He will also visit the A. B. Kardbeslag Co. at Norrkoping, Sweden, manufacturer of Swedish card clothing.

Ralph S. Hoisington has been named assistant to the vice-president in charge of raw material procurement at Dan River Mills, Danville, Va. Prior to joining Dan River, Hoisington held an executive post with Anderson-Clayton Co., cotton merchant of Memphis, Tenn.

C. Perry Clanton Jr. has been appointed district sales manager of Atkinson, Haserick & Co., textile machinery importers of Framingham, Mass., agent for Platt Bros. Co. of England. Clanton will be responsible for the states of North Carolina, Virginia, Tennessee and Texas. He will continue to make his residence in Charlotte, but will have his headquarters in the company's Greenville, S. C., office. . . . Harvey H. Clinch has been named district sales manager, covering the states of South Carolina, Alabama, Georgia and Mississippi. Mr. Clinch has been located in Greenville for the past two years and will make his headquarters in the new Greenville office of Atkinson, Haserick. . . . F. Eugene Bozeman, who has been associated with this concern for several years, assumes the new position of technical service manager. He will work out of the Greenville office and cover all of the Southeastern states.

Cleveland L. Adams, head of the School of Textile Technology at Auburn, has left on a mission for the State Department in which he will appraise textile industries in foreign countries being supported by this country's foreign aid program. Adams will stop in Paris, Rome, Athens, Cairo, Karachi, Kabul, New Delhi, Bombay, Calcutta, Hong Kong, Tokyo, Honolulu.

John Bell has been named production superintendent at the Bishopville (S. C.) Finishing Co. . . . Cal Getgood has been named dyeing superintendent. . . . James Parnell has been named office manager, succeeding Paul Gillespie, who has been transferred to the New York office.

Kenneth K. Karns, sales engineer for Dayton Rubber Co.'s textile products division, has been appointed managing director of the firm's plant in Dundee, Scotland. Karns will be in charge of manufacturing and sales of all Dayton products in the United Kingdom and Europe. He will report to R. D. Rosenberg, manager of Dayton Rubber International. Karns became associated with Dayton Rubber in 1934, spending the first nine years in production. The balance of his career has been devoted to sales with headquarters in the Greenville, S. C., office.

Felton Mundy has joined the staff of Newberry, S. C., Mills as chief industrial engineer. Mundy was previously with the United Merchants & Manufacturers Mill at Aragon, Ga., where he served as technical superintendent for 13 years.

B. J. Dodson has been named assistant manager of the consumer products division of Texize Chemicals Inc. Dodson has been manager of operations for the Southwest and as such managed the new plant recently built by Texize in Palestine, Tex. In his new capacity he will return to Greenville and rejoin the executive staff at the home office of the firm. Prior to going to Palestine Dodson was manager of marketing services for the company.

Clarence F. Gregory has been named technical sales service representative for rayon staple at the American Viscose Corp., Front Royal, Va., plant. Formerly staple department head, Gregory will now report to Warren K. Simmons, manager of staple technical sales service. A graduate of North Carolina State College with a B. S. degree in textile chemistry and dyeing, Gregory joined American Viscose as a chemist in 1941.

New officers have been elected by the Batson Mfg. Co., Greenville, S. C., manufacturer of textile supplies. The officers are as follows: Louis P. Batson Jr., president; H. Elliott Batson, executive vice-president; Mrs. Louis P. Batson Sr., vice-president; Mrs. John P. Batson Sr., vice-president; Mrs. E. Randolph Stone, secretary; and John P. Batson Jr., treasurer. Louis Batson is also chairman of the board of Louis P. Batson Co., selling agent for Batson Mfg.

H. Elliott Batson

Louis P. Batson Jr.

J. B. Griffin, superintendent of Waverly Mills, Laurinburg, N. C., has been re-elected to the city council for a term of four years. Griffin was first elected to the city council two years ago.

June H. Creek has been named superintendent of Aleo Mfg. Co., subsidiary of M. Lowenstein & Sons in Rockingham, N. C. Cheek succeeds Winder Gary, who has retired. He joined Aleo as industrial engineer in 1951. A graduate of North Carolina State College School of Textiles, Cheek has been in textile work for nearly ten years.

John J. Smith has been named president of Chicopee Mills and Chicopee Mfg. Corp., New Brunswick, N. J. He succeeds O. Boucher, who has been named to the

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executive committee of Johnson & Johnson, the parent firm. Smith has been vice-president in charge of the nonwoven fabrics division of Chicopee Mills since 1954.

William Pitts, overseer of the spinning department of Echota Mill, Calhoun, Ga., retired from the company recently.

Robert G. Sharpe has been named manager of the Spofford Mills plant of M. Lowenstein & Sons in Wilmington, N. C. Sharpe was formerly superintendent of the Granby Plant of Pacific Columbia Mills in Columbia, S. C., another Lowenstein subsidiary. Sharpe is a textile engineering graduate of Clemson College.

J. A. Taylor, formerly with the Deering Milliken Service Corp., has joined the Johnston Woolen Mill, division of Excelsior Mills' worsted section, as technical superintendent. . . . Robert T. Odum has been named senior industrial engineer at Johnston.

Dr. Wendell M. Patton, assistant to the president of Shuford Mills, Hickory, N. C., has been named president of the High Point (N. C.) College. Dr. Patton will take over his duties at the Methodist College in September.

James R. Latham has been named a vice-president of Hess, Goldsmith & Co. and divisional manager of fiber glass manufacturing and finishing. Latham joined Burlington Industries, the parent company, in 1936. He will make his headquarters in Greensboro, N. C., and will co-ordinate all manufacturing and finishing operations of Hess, Goldsmith & Co. Latham, formerly plant manager of the Altavista Weaving Co., will be succeeded by P. C. Stott.

L. Hugh Ballard

L. Hugh Ballard, textile engineer and consultant, has been named sales engineer for the Charlotte district office of Saco-Lowell Textile Machinery Division. A textile graduate of North Carolina State College, Ballard worked for four years as textile engineer for Judson Mills, Greenville, S. C., and six years as director of industrial engineering and general superintendent of American & Efird Mills, Mount Holly, N. C. For the past three years he has been Southern manager and senior textile engineer for Werner Textile Consultants, doing engineering and management consulting in Canada, South America and Europe, as well as in the U. S.

John Milford Caughman, superintendent, Spartan Mills, Spartanburg, S. C., has been awarded the LL.B. degree by LaSalle Extension University, Chicago, Ill., upon completion of his American Law and Procedure Training. He completed this training in spare time. Caughman has a B. S. degree from North Carolina State College. He is a former member of Spartanburg zoning commission and a member of planning commission.

Dr. Walter C. Carter has been promoted to section head, dyeing research, in the Chemstrand Corp.'s applications research and service department. Dr. Carter joined Chemstrand as a research chemist in 1952 and was promoted to group leader in dyeing research in 1955.

Charles B. Adams has been appointed director of purchasing of synthetic yarns succeeds James A. Lybrand Jr., who retired recently. Adams has been with J. P. Stevens & Co. and predecessor companies for 21 years. For the past 12 years he has been assistant director of purchasing of synthetic yarns and fibers for the Stevens Co.

Three new vice-presidents have been elected by the board of directors of Burlington Industries Inc., Greensboro, N. C. They are George E. Norman Jr., C. Lowrey Stafford Jr. and William R. Landa. Norman has been with Burlington since 1938 and currently has broad group merchandising and manufacturing responsibilities. He joined Burlington as a manufacturing assistant following graduation from North Carolina State College School of Textiles. Since 1946 he has held varied executive manufacturing and administrative responsibilities. He makes his headquarters in Greensboro. Stafford, in addition to broad merchandising responsibilities, is in charge of man-made yarn and fiber procurement. He joined Burlington in 1948. He also is a

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graduate of North Carolina State College School of Textiles and has held varied executive merchandising and manufacturing positions, most recently as president of Burlington Tricot Fabrics Co. He makes his headquarters in New York City. Landa, who has executive responsibilities for the company's export and foreign operations, joined Burlington in 1955 as export manager and shortly afterwards was named president of Burlington Export Co. Prior to joining Burlington, he was associated with the textile export business for 16 years. He also makes his headquarters in New York City.

William M. Klothe has been named president of the Pellon Corp., New York City. Klothe joined the firm in 1952 to set up the women's wear division for Pellon's nonwoven interlining. He became sales manager of all divisions in 1957 and since then has been vice-president in charge of sales.

James A. Lybrand Jr. has retired as vice-president of J. P. Stevens & Co., New York City. His retirement marks the close of 48 years in the textile business. Lybrand has been associated in an administrative capacity in textiles since 1911 when he started his career with the Republic Cotton Mills, Great Falls, S. C., as assistant to the vice-president and treasurer. He joined the Slater Mfg. Co. in 1928 and served there until 1946. From 1938 to 1946 he also served at times in various capacities of production manager, assistant secretary, treasurer and director of the Carter Fabrics Corp., Greensboro, N. C. Since 1946, when the Slater and Carter companies became a part of J. P. Stevens & Co., he has been director of purchases of synthtetic yarn and fibers for the Stevens Co. He was elected a vice-president of Stevens in 1952.

Walter L. Goddard, general manager of the northern group of the woolen and worsted division of J. P. Stevens & Co., will retire on September 1. Goddard began his textile career in 1909 with Walworth Bros., where he served for 31 years. Later he was with A. D. Juilliard & Co., Lorraine Worsted Mills and Paton Mfg. Co. In 1950 he joined J. P. Stevens & Co. as manager of the Hockanum Division and in 1951 was made general manager of the northern group of the woolen and worsted division. . . . Donald C. Johnson, assistant general manager, will be appointed general manager of the northern group following the retirement of Goodard. Johnston, a graduate of Georgia Tech, joined the Stevens Co. in 1946.

Dr. Bixler

Dr. Dean A. Bixler has been named research director for Moretex Chemical Products, Sptartanburg, S. C. Bixler joined Moretex from the organic research department of Olin Matheison Co., New Haven, Conn., where he has been for the past five years. Bixler has also been associated with Buckeye Cotton Oil Co., a division of Proctor & Gamble. He is a PhD graduate from Purdue University.

Richard J. Powers has been named a vice-president and general counsel of Indian Head Mills, New York City. Powers has been associated for six years with the company's corporate counsel, the New York firm of Cravath, Swaine & Moore. He will assume his duties with Indian Head in mid-September. This is a newly-created post at Indian Head. Powers will serve as general counsel of the corporation and its subsidiaries and assist management in its program for further diversification through acquisitions within the textile industry. He has also been named a member of the management policy committee.

Richard G. Mansfield has been appointed technical sales representative for the fiber department of Air Reduction Chemical Co., New York City. He will be engaged in market development and technical service on vinylon, polyvinyl alcohol fiber now being marketed by Air Reduction on a developmental scale. Mansfield was fiber sales representative for Dow Chemical Co. from 1956 to 1959 and was assigned to the Boston office for the past year. Earlier he was technical sales representative for Du Pont's textile fibers department.

Celanese Fibers Co., an operating division of Celanese Corp. of America, New York City, has appointed four new vice-presidents, according to John W. Brooks, president. They are: Dr. Bruce B. Allen, vice-president and technical director; Peter H. Conze, vice-president and director of marketing; Fletcher Horn, vice-president and assistant to the president; and David

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Taylor, vice-president and manager of manufacturing. Dr. Allen had been technical director of the company's former fibers division for the last three years. He joined Celanese in 1946 when the company acquired the Tubize Rayon Corp. Conze joined Celanese in 1946. For the last two years, he served as director of textile marketing. Horn, since 1957, had been assistant to the general manager of the company's former fibers division. He joined Celanese in 1940, working initially in dyeing operations in the Cumberland plant.

Several appointments in technical service have been announced by Union Carbide Chemicals Co., division of Union Carbide Corp., New York City. John R. Anderson, Carl K. Fink, Samuel M. Livengood, William H. Millett and Edward R. Weidlein Jr. have been appointed assistant directors of the technical service laboratory; E. Lacy Gibson has been named administrative assistant to the director. The five assistant directors will be responsible for experimental programs and business functions of the laboratory now being built near Tarrytown, N. Y., and due for completion in late 1959 or early 1960. Gibson will co-ordinate and administer certain of the use research, customer service and training functions.

George W. Pierce, formerly executive director and general manager of American & Efird Mills, finishing division, has recently joined Riggs & Lombard and its affiliated companies, Cook Machine Co. and Parks & Woolson Machine Co. as Southern sales engineer. Pierce, a graduate of Lowell Technological Institute, has been associated with the dyeing and finishing phase of the textile industry since 1925: In his new capacity, he will serve the cotton and synthetic dyeing and finishing field in the South, and make his headquarters at the Riggs & Lombard office in Charlotte, N. C.

Alfred Greenfield, product manager for Dow Chemical Co.'s Zefran acrylic fiber, has been transferred from New York to textile fibers department headquarters at Williamsburg, Va. Greenfield has been with Dow's textile fibers department for two years, and until his recent transfer to Williamsburg has been responsible for New York City mill sales contacts for Zefran. . . . James Jones has been appointed to the position of product manager for Rovana, Dow's new saran micro-tape. Jones, who has been with Dow for 10 years, formerly served as field sales manager for Zefran and as special assistant to the department manager at Williamsburg.

J. L. Richard Landry has been promoted to group leader, dyeing research, in the applications research and service department of the Chemstrand Corp., New York City. Landry held a teaching position at the Philadelphia Textile Institute before joining Chemstrand in July of 1957. he is a member of American Association of Textile Chemists & Colorists, the American Chemical Society, Society of Dyers and Colorists, and the Inter-Society Color Council.

Dr. G. Preston Hoff, manager of the planning division in the Du Pont Co.'s textile fibers department, has retired after 30 years with the company. Prominently identified with synthetic fiber research and development since 1925, Dr. Hoff pioneered the early development work on high tenacity rayon and selected the name Cordura for the yarn. Cordura was the first successful high tenacity rayon yarn for use in automobile tires. He was also in charge of the research group responsible for carrying the nylon development from the laboratory stage to commercial manufacture. Later he directed research leading to the commercialization of Orlon acrylic fiber.

James G. Fox, formerly executive vice-president, has been named president of the National Aniline Division of Allied Chemical Corp. Fox succeeds Chester M. Brown, who becomes president and chief operating officer of the parent concern. Fox joined Allied in 1926 following graduation from Yale. He served in many posts with the general chemical division before joining National Aniline.

OBITUARIES

Darwin R. Broome, 71, former superintendent of the Arcade Mills Division of Mt. Vernon Mills in Rock Hill, S. C., died July 16 at his home. Mr. Broome joined the mill in 1912 and was made superintendent in 1931. Survivors include his widow, a brother and three sisters.

Howard R. Cook, 63, president of Atlanta (Ga.) Brush Co., died August 9. Mr. Cook joined Atlanta Brush in 1929 as a vice-president. He was named president in 1952. His widow, two daughters and a son survive.

I. Fletcher Craven, 86, president of Columbia Mfg. Co., Ramseur, N. C., died August 18 after a critical illness of two weeks. His widow and a son survive. Columbia is a producer of sheeting and bag fabrics.

Harold V. Farnsworth, 64, vice-president and director of Atkinson Haserick Co., Framingham, Mass., died recently at his home in Winchester, Mass. Mr. Farnsworth had been with the company for many years. He was also general manager of the firm's Platt Machinery Division and a director of Holdsworth Mfg. Co. Survivors include his widow and a daughter.

James Henderson, 62, vice-president, sales manager and a director of Parks-Cramer Co., Fitchburg, Mass., died August 7 in a Charlotte hospital. He is survived by his widow, two daughters and a son.

George E. Marble, 81, retired vice-president of Curtic & Marble Machine Co., Worcester, Mass., died in St. Petersburg, Fla., recently. Mr. Marble had made his home in St. Petersburg since his retirement. Surviving are his widow, two sons and a daughter.

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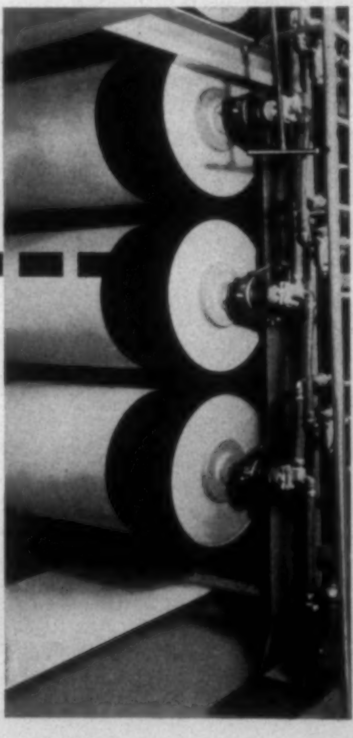

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

SYLACAUGA, ALA. — Avondale Mills has reported its earnings during the 40 weeks ended June 7 totaled $862,838, which is equal to $1.26 per share of common stock. This compares with the $1.26 per share for the same period last year. J. Craig Smith, president and treasurer, said the company's unfilled orders are 35% greater than they were at the same time last year and that inventory of finished goods is 26% lower than the previous period.

NEW YORK, N. Y.—Burlington Industries has reported consolidated net sales of $581.6 million for the nine months ended June 27. This compares with the $485.1 million in the same period last year. Net earnings for the period ended this June were $18.3 million after deducting income taxes of $19.6 million and minority interests in earnings of $601,000. Net earnings for the nine months ended June 28, 1958, were $7.8 million after taxes of $9.5 million and minority interests of $229,000. Net earnings for the three months ended June 27, 1959, were $8.1 million while the same period last year saw $1.6 million net earned by the company. J. Spencer Love, chairman, reported sales of Burlington for the fiscal year ending October 3 will approximate $800 million with earnings running close to $3 per share. These figures compare with $651 million in sales and earnings of $1.21 per share during fiscal 1958.

FAYETTEVILLE, TENN.—Elk Cotton Mills is selling company-owned houses to its employees and will use the proceeds to strengthen its pension plan for retired employees. Ernest Rees, president, said the sale would involve 32 company-owned houses. Employees now living in the houses will be given preference at the time of sale. Rees said final details of the plan should be completed within the next six months.

NEW YORK, N. Y.—Reliance Mfg. Co. has announced consolidated sales for the first half of 1959 were $25.9 million compared to $19.6 million during the same period last year. Earnings this year after provision for income taxes were $728,356. During the first half of 1958 the company sustained a loss of $551,346 before an estimated Federal income tax refund arising from a loss carry-back.

DANVILLE, VA.—Dan River Mills reported encouraging gains in sales and earnings for the quarter ended July 3, 1959, and for the first six months of 1959. Net earnings for the quarter just ended were about 35% higher than net profit in the like period a year ago on an 8.9% increase in sales. For the first six months of this year, net earnings showed better than a 16% improvement. On a per-share basis, earnings for the June quarter were equal to 30 cents per share, compared with 22 cents a year ago. For the first half, they were equal to 57 cents per share in comparison with 49 cents per share in the first six months of last year. W. J. Erwin, Dan River's president, said better prices had begun to be reflected in second quarter results, but that because of forward commitments, a large percentage of fabrics shipped in the June quarter were delivered at the old prices prevailing before the recent up-surge in textile volume and prices. He added that with substantial volume in sight and better prices in effect on fabrics to be shipped in the balance of the year, sales and earnings for the last six months should show a significant improvement over results in the same period last year. Consolidated net sales for the six months just ended totalled $85.2 million, a record high volume for the first half. This compares with sales of $79.6 million in this period last year. Net earnings increased to $2.7 million as against $2.3 million in the first six months of 1958.

CORNELIUS, N. C. — Samuel Hird & Sons, Garfield, N. J., has purchased a 278-000-square-foot plant here from Frank Ix & Sons for over $1 million. The Hird firm, which also operates a plant in Clifton, N. J., will use the Cornelius building to expand and supplement portions of its spinning and weaving of worsted and blends piece goods operations. The one-story brick, steel and concrete building is of post-war construction and is equipped for complete humidification. It is located on a tract of approximately 15 acres and is 19 miles from Charlotte. A spokesman for the company said the installation of new machinery and equipment and the employment of personnel will begin shortly. Frank G. Binswanger Inc., Southern Division, industrial realtors, negotiated the transaction.

WHITINSVILLE, MASS.—Whitin Machine Works has announced the receipt of an order from American Thread Co. for 140 Piedmont spinning frames totaling 43,680 spindles. Sixty of the frames are scheduled for the company's plant in Tallapoosa, Ga., with the balance to be installed in the Dalton, Ga., plant.

DURHAM, N. C.—A wage dispute between the Golden Belt Mfg. Co. and Local 248 of the Textile Workers Union of America has been settled reportedly with union acceptance of a 6% wage increase. Negotiations for a new contract had been underway for about a month with the union said to be pressing for a 10% increase and the company offering a 4% increase. The union had voted to strike when the agreement was reached.

BOSTON, MASS. — The international division of Saco-Lowell Shops is currently completing and shipping an order of approximately $750,000 for various types of textile machinery to Manufactura de Pilar, Pilar, Paraguay. Included in the order are: 50 cards with continuous strippers; four deliveries pre-comber Versamatic drawing; one 10½-inch lap winder; one comber; four deliveries post-comber Versamatic drawing; 20 deliveries Versamatic finisher drawing for carded work; six FS-2 roving frame changeovers; 18 Model SG3H Gwaltney spinning frames; and 21 Duo-Roth Stay Clean spinning frame changeovers. Shipments are being made from the company's plants in Sanford, N. C., and Easley, S. C.

CARTERSVILLE, GA.—Cartersville Dyeing & Finishing Inc. has purchased a building from Kingston Mills here for its commission wool dyeing and scouring operations. The new commission dyeing company will also have equipment for piece dyeing man-made and natural fibers.

BOSTON, MASS.—The Kendall Co. has reported net earnings of $1.3 million, or $1.29 per common share, for the 12 weeks ended June 13, 1959. Richard R. Higgins, president, noted that this shows a marked improvement over the same period a year ago when earnings of $769,000, or 72 cents per common share, reflected the effects of the business recession. Sales for the 12-week period were $25.9 million. Sales for the year to June 13 amount to $51.8 million and constitute a new volume record for the company.

ELKIN, N. C.—Hugh Chatham, president, Chatham Mfg. Co., has reported that the company had a 15% increase in sales for the first half of 1959 and expects to maintain this pace for the rest of the year. He reported gains were steady throughout the company's blanket, apparel fabric, automobile and yarn divisions. Chatham said blankets account for about 60% of the company's volume. Chatham also reported the company recently completed the installation of a new I.B.M. 305 RAMAC data processing machine. Rental on the unit is said to be $36,000 per year. Chatham Mfg. Co. will move its New York City offices about December 1, to 111 West 40th Street from its present Worth Street location.

BOSTON, MASS.—Pepperell Mfg. Co. has reported that during the year ended June 30, 1959, it had the second largest sales in its history with sharply increased earnings. A year-end dividend of $1 per share, twice that of last year, was voted in addition to the regular dividend of 75 cents. Sales for the period amounted to $93.0 million in the period compared to $80.9 million a year earlier. The increase is 14.9%. Net operating income was $2.5 million or $5.05 per share. In addition, the company reported a non-recurring income of $1.2 million from the sale of company-owned houses and land. The previous year's operating net was $1.8 million or $3.79 per share.

NEW YORK, N. Y.—M. Lowenstein & Sons common stock earnings for the June quarter should be better than the 30 cents per share earned in the first quarter, according to Leon Lowenstein, executive chairman of the board. In the second quarter of 1958 the company earned ten cents a share. Lowenstein's estimate places the first half earnings at over 60 cents per share which is more than the 57 cents earned for the entire year of 1958. Inventories of the company are down 15% from last year, Lowenstein said, and at the end of May unfilled orders were at the "top of all time" for M. Lowenstein & Sons. He reported that some orders were booked as far ahead as April 1960.

ROCKINGHAM, N. C.—J. P. Stevens & Co. has purchased the vacant Pee Dee Mill No. 2 here and has announced that for the time being the mill will be used for storage of machinery and raw materials. The purchase involved nearly 55 acres of land. The mill, started in 1899, has been closed since 1949. Stevens operates the Hannah Pickett Plant, of its woolen and worsted division, in Rockingham.

NEW YORK, N. Y.—Beaunit Mills Inc. has reported earnings 4½ times greater for the quarter ending June 30, 1959, than those of the same period last year. Sales for the period increased 43.8%. Net profit for the three months ended June 30, the company's first fiscal quarter, was $1.7 million, equal to 85 cents per share. This compares with $374,634, or 16 cents per share, for the corresponding period last year. Sales for the period this year rose to $29.3 million from $20.3 million a year earlier.

DURHAM, N. C.—Erwin Mills Inc. has reported net sales of $18.4 million for the three months ended June 30 with profit after taxes of $488,635. The company's sales and profits for the same period in 1958 amounted to $15.6 million and $315,889, respectively. Profits per share in the second quarter of this year amounted to 45 cents while the period last year saw per share earnings of 29 cents. The per share earnings this year were 54.7% greater than in the same period last year while sales volume improved 18.1%.

NEW YORK, N. Y.—Pacific Mills, controlled by Burlington Industries Inc., has reported a profit of $1.9 million, equal to $1.96 per share, in the nine-month period ending June 27. This compares with a net loss of $128,000 in the like period a year earlier. Sales for the nine-month period amounted to $64.2 million, an increase of 12.5% over the $57.1 million in the same period a year earlier.

WESTFIELD, MASS.—J. P. Stevens & Co. has purchased the building and land of Buresh Nonwovens Inc. here from Ames Textile Corp., Lowell, Mass. The plant produces composition fabrics largely for industrial uses. It is a one-story cinder block and brick building containing about 11,000 square feet of manufacturing area. The plant is situated on an eight-acre tract. The sale price was reported to be $115,000.

GREENSBORO, N. C.—Cone Mills Corp. has reported consolidated net sales of $99.8 million for the first six months of this year. This compares favorably with the $81.1 million during the same period last year. Income before provision for taxes in the first half of 1959 amounted to $5.4 million. Net income after taxes was $2.6 million. Income before taxes during last year's first half was $3.6 million and net income after taxes was $1.8 million. Earnings per share on common stock was 74 cents for the first six months this year, compared with 49 cents last year.

NEW YORK, N. Y.—The consolidated earnings of Reigel Textile Corp and subsidiaries during the 40 weeks ended July 4, 1959, totaled $2.4 million. After provision for Federal and State income taxes the company's profits amounted to $1.3 million. Net sales and service charges for the period amounted to $71.0 million. For the 40 weeks a year earlier sales were $60.9 million and profit after taxes $513,500. Earnings per share of common stock for the period ending this year were $1.10 while in the previous period the company's stock earned 37 cents per share.

BLUEFIELD, VA.—The United Piece Dye Works has completed negotiations for a new plant here to be used for development work and to supplement regular production, according to Charles Blount Jr., president. A 147,000-square-foot single-story structure was acquired by the company under a long-term lease. Operations are expected to be started in 1960. The plant will be equipped with machinery reserved from the liquidation of the company's Lodi, N. J., plant. U.P.D.W. also operates plants in York, Pa., and Charleston, S. C. The newly-leased plant was built in 1956 by the local Area Development Corp. of Bluefield and was not previously a textile facility.

GREENVILLE, S. C.—Woodside Mills has installed 100 Draper Corp. shuttleless looms. The looms are expected to produce superior quality print cloth. The installation will be treated as a research project to evaluate the machine's features and production factors, according to Robert S. Small, Woodside president.

PHILADELPHIA, PA.—The Military Clothing & Textile Supply Agency has reported the award of several contracts to various textile mills. An award for 270,000 yards of 40-inch cotton uniform twill for the U. S. Navy was made to Putnam Mills Corp., New York City. The value of the award was $171,180. Dan River Mills, Danville, Va., received an award valued at $255,805 for 550,000 linear yards of 36-inch, tan cotton oxford cloth. The fabric is being produced for the Air Force. Dan River Mills was also awarded a contract for 350,000 yards of blue cotton oxford cloth 36 inches wide. Also for the Air Force, the value of the award was $136,074. West Point (Ga.) Mfg. Co., received an award for 182,688 17-inch wide and 36-inch long cotton dish towels. The procurement was valued at $34,421. The Cramerton (N. C.) Mills Division of Burlington Industries received an award for 305,000 linear yards of 45-inch light blue and white polyester fiber and cotton cord fabric. The dollar value of the contract was $371,185 and the procurement was for the Navy. J. P. Stevens & Co. has received an award for 250,000 yards of 42-inch cotton twill. The procurement was for the Air Force and was valued at $263,650.

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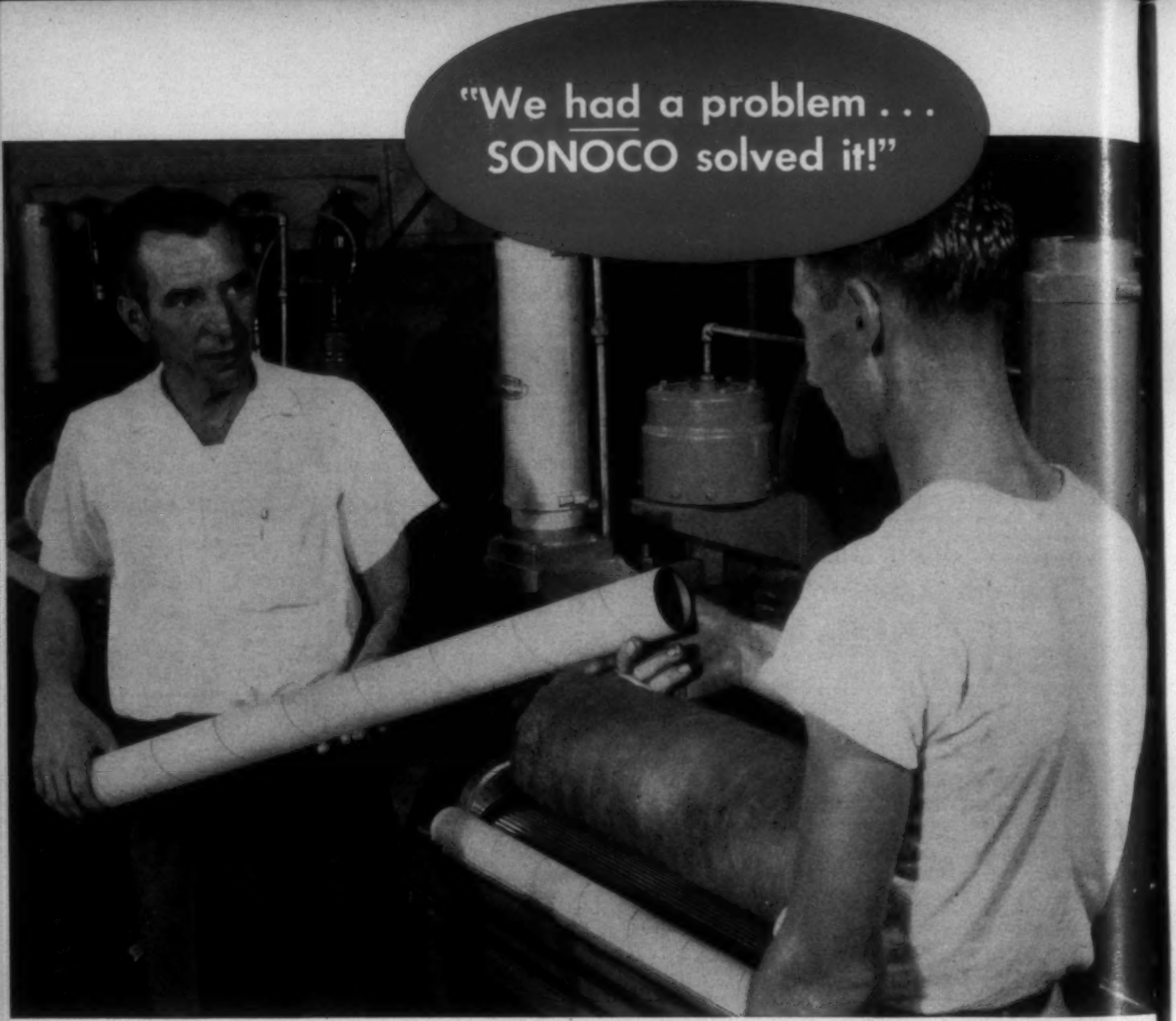

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Which Way Will It Go?

THE Landrum-Griffin Bill aimed at curbing labor racketeering may well separate the statesmen from the politicians before this session of Congress closes. As this is written the bill has been referred by the Senate to a conference committee made up of seven senators and seven representatives. The committee can do one of three things with it:

(1) Approve it as passed by the House;
(2) Soften its provisions to bring it more in line with the less effective provisions of the Kennedy-Ervin Bill; or
(3) Kill it—and *any* chance of labor legislation in this session—by failing to agree to any compromise on it.

There isn't any real indication what treatment the bill will get from the committee. Looking optimistically at its chances, you'd think the significant margin by which the bill passed the House would considerably strengthen Senate support of it. Those senators who last April called the Kennedy-Ervin Bill inadequate certainly should rally behind the Landrum-Griffin Bill. And certainly each and every senator, regardless of his previous stand, would be wise to re-evaluate his thinking in the light of the strong public demand for legislation with teeth in it.

The trouble with getting too optimistic, though, is that it leaves you wide open for disappointment. And as far as labor legislation is concerned, the pessimists have been accurately calling the shots for a long, long time. We've been following the activities of the McClellan Rackets Committee for months. In view of what this committee has dragged into the limelight in support of its racketeering charges, we would have thought an effective piece of legislation would have cleared both houses sessions ago. Why it ain't we don't know, except for the fact that too many members of Congress are sitting in seats they've sold to labor.

Still another reason for pessimism is the fact that both houses of Congress are currently packed with prime presidential candidates. Senators Kennedy (D., Mass.) and Johnston (D., Tex.) are two names most frequently mentioned in this regard, and both have made it amply plain that they don't intend to run the risk of losing any support *any*where by doing *any*thing *any*body might fall out with them over. Judging these two, and there are more, on the basis of their stand against labor racketeering, we can only conclude that neither is of presidential timber.

Regardless of the outcome, honest working people and management alike can take heart from the August 14 action of the House; and can reasonably expect some measure of relief from increasing abuses from crooked labor unions.

A Good Record For Textiles?

AN anonymous reader has sent us a mimeographed, one-page circular labeled "Suggested Bulletin Board Material." It reads, and we quote:

"Not too many people realize it, but the American textile industry has been one of the chief influences against inflation in this country in recent years.

"Inflation, as you know, is that evil which makes your dollar worth less.

"You read every now and then about the dangers of inflation, and those of us in the textile industry can take pride in the record of our industry.

"The wholesale prices of other manufactured products are more than one-third above those for textile products, according to government figures.

"That is, an average textile item that cost one dollar in 1947-49 costs only 91 cents now. On the other hand, an average other manufactured item that cost one dollar in

1947-49 costs $1.28 now.

"Just think what it would mean to the budgets of individuals and our government if the other American industries could match this performance of the textile industry.

"Here's what would happen: The automobile that sells today for $3,000 would cost only $2,100, and the home that sells for $10,000 would cost only $7,000, and the home appliance that sells for $100 would cost only $70. That is, if other industries could match the performance of the textile industry.

"Furthermore, this has been done by the textile industry in the face of steadily rising costs.

"Yes, we can all be proud of this record, because we all had a part in it."

If this is good bulletin board material, then grits ain't groceries. We don't believe there's anybody anywhere who for one minute can take honest pride in the fact that textiles are selling for less now than they did ten years ago while at the same time the cost of living has been rising like Jack's beanstalk.

Let's be honest. If we could pull it off, one dollar neckties would be selling tomorrow for $10.00 apiece cash and carry.

If we're wrong and there *are* those mills who are determined to hold the line against inflation, we'd like to remind them that a church mouse makes a lousy philanthropist.

The Card Of The Future

A LOT of interest has been shown in our article on "The Card Of The Future" in our July issue, and we're grateful to those readers who have taken the time to drop us a line on it. We're sorry, too, that we can't fill the order we got for one. But we did learn that a lot of study is being given the carding process, both by mill men and by machinery manufacturers. One mill reports that it has been trying to develop one of the features we pointed out; another chides us for borrowing from the Japanese. Of particular interest was a letter from a machinery manufacturer who promises within a few months to show us a card of the future producing a controlled weight of quality synthetic sliver at 900 to 1,200 pounds per hour.

Our next project: A loomless shuttle.

Keep Your Eye On Nonwovens

PRODUCTION of nonwoven fabrics may reach a record 125 million pounds this year, according to estimates by *Chemical and Engineering News*. The previous high was 110 million pounds in 1957. The prediction, based on production figures for the first six months, is evidence enough that nonwovens are growing up. The time was when the term nonwoven fabric simply meant one made of waste fibers and low cost binders. This time is past.

As pointed out in "Who's Ahead in Nonwovens?" in the August 1959 issue of TEXTILE BULLETIN (P. 38) interest in nonwovens is enormous in almost all countries having sizeable textile manufacturing. Progress in nonwovens is noted for Britain, France, Italy and Japan.

Many agree a real breakthrough in nonwovens for apparel fabrics could easily triple total production. We hope the textile industry is taking a long, hard look at nonwovens so that when the boom comes, nonwovens won't belong to the paper industry or foreign competitors.

TEXTILE INDUSTRY SCHEDULE

— 1959 —

Sept. 10-11 (Th-F)—Annual meeting, **CARDED YARN ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 10-11 (Th-F)—Fall meeting, **THE FIBER SOCIETY**, Textile Research Institute, Princeton, N. J.

Sept. 17-18 (Th-F)—34th Annual Convention, **THE COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 17-18 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSOCIATION**, The Read House, Chattanooga, Tenn.

Sept. 23-24 (W-Th)—Annual meeting, **NORTHERN TEXTILE ASSOCIATION**, Wentworth By-The-Sea, Portsmouth, N. H.

Sept. 28-29 (M-Tu)—Third annual textile processing symposium, **AMERICAN GAS ASSOCIATION** and the **SOUTHEASTERN GAS ASSOCIATION**, Sedgefield Inn, Greensboro, N. C.

Oct. 1-2 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 3 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA** (Slashing & Weaving), Hightower Textile Building, Georgia Tech, Atlanta.

Oct. 7 (W)—**CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Mayflower Hotel, Washington, D. C.

Oct. 8-9 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 8-9 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS & STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

Oct. 8-10 (Th-Sa)—Annual national convention, **A.A.T.C.C.** Sheraton Park and Shoreham Hotels, Washington, D. C.

Oct. 10 (Sa)—Fall meeting, **SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Clemson, S. C.

Oct. 10 (Sa)—Fall general meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES** (Carding and Spinning), Langdon Hall, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 17 (Sa)—Fall meeting, **NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Y.M.C.A., High Point, N. C.

Oct. 17 (Sa)—Annual meeting, **(GEORGIA) TEXTILE EDUCATION FOUNDATION**, A. French Textile School, Georgia Tech, Atlanta.

Oct. 27-28 (Tu-W)—Technical Advisory Committee meeting and Board of Trustees meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Oct. 31 (Sa)—Fall meeting, **EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, School of Textiles, N. C. State College, Raleigh.

Dec. 5 (Sa)—Fall meeting, **PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Johnston Memorial Y.M.C.A., Charlotte, N. C.

— 1960 —

Feb. 18-19 (Th-F)—Annual conference, **TEXTILE DIVISION, AMERICAN SOCIETY FOR QUALITY CONTROL**, The Clemson House, Clemson, S. C.

Apr. 7-9 (Th-Sa)—Annual meeting, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Americana Hotel, Bal Harbour, Fla.

Apr. 20-21 (W-Th)—Annual meeting, **ALABAMA TEXTILE MANUFACTURERS ASSOCIATION**, Buena Vista Hotel, Biloxi, Miss.

May 23-27 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION**, Atlantic City, N. J.

May 26-28 (Th-Sa)—Annual meeting, **SOUTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, The Cloister, Sea Island, Ga.

May 31-June 2 (Tu-Th)—11th Annual **COTTON RESEARCH CLINIC** (sponsored by The National Cotton Council), Grove Park Inn, Asheville, N. C.

June 23-25 (Th-Sa)—52nd annual convention, **SOUTHERN TEXTILE ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 3-7 (M-F)—The 21st **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

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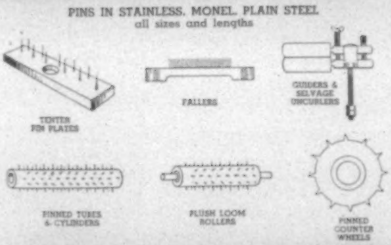

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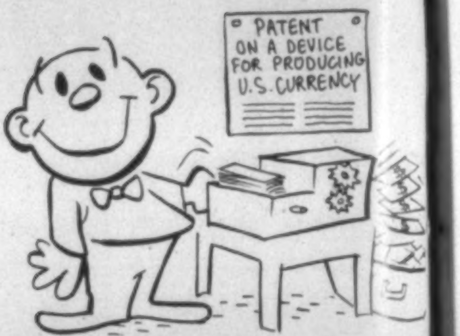

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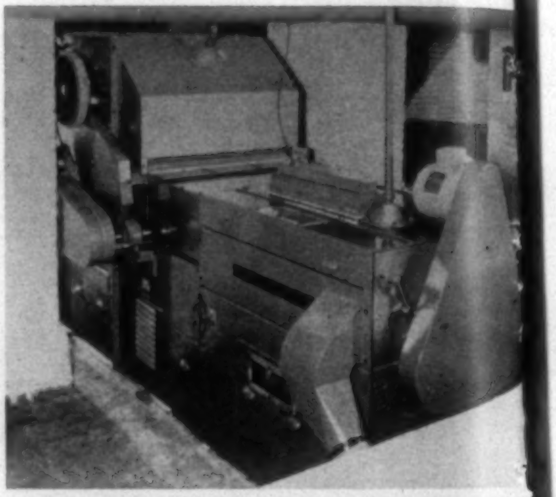

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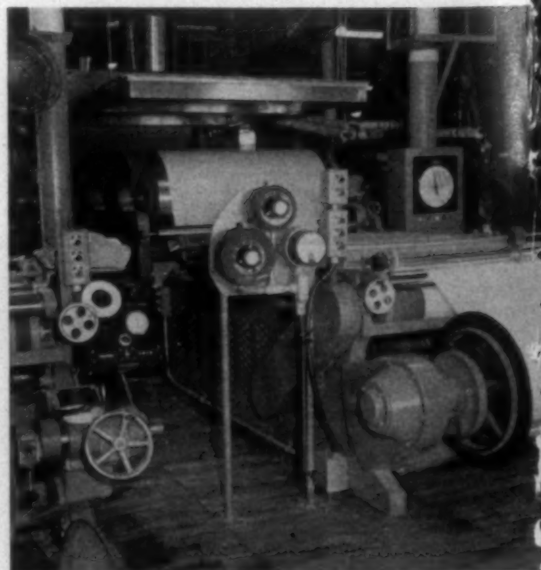

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